SHANGHAI BIRDS

151'

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Patricia Douglas

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Shanghai.

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SHANGHAI BIRDS

"Shanghai Birds"

Plate No. VII

1.—Bush-warbler (female)
2.—Bush-warbler (male)
5.—Fantail Warbler
6.—Blue-tailed Robin
3.—Von Schrenk's Reed-warbler
4.—Daurian Redstart
7.—Great Reed-warbler

(Frontispiece)

598/63

SHANGHAI BIRDS

A Study of Bird Life in Shanghai and the Surrounding Districts

BY

E. S. WILKINSON

SHANGHAI
NORTH-CHINA DAILY NEWS & HERALD LIMITED
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NATIONAL MUSEUM
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OF VICTORIA

FOREWORD

The observations summarised in this book have been spread over the last five years, and are based on what I have seen chiefly in the course of early morning walks and rides in the immediate neighbourhood of Shanghai. During my last Home leave I spent many busy days in the British Museum (Natural History) at South Kensington, and was thus enabled to check up my local observations and make certain of the various birds I had identified. I must take this opportunity to thank Dr. Frank Lowe, Mr. H. Bench Usher and other officials at the British Museum for their kindness in giving me every possible facility to study specimens in the Bird-galleries. I must also thank Mr. H. Gronvold, the great bird artist whose pictures adorn this book, for his care and patience in dealing with a very amateur ornithologist. I should indeed be ungrateful if I failed to add a word of thanks to that well-known local naturalist Mr. A. de C. Sowerby for the sympathetic interest he has always taken in my work, for his encouragement in publishing my early articles in the "China Journal" and for his ever-ready help when I have been puzzled over local or scientific names.

Finally, I wish to thank Mr. R. W. Davis of the "North-China Daily News," whose technical skill has so greatly added to the appearance of this book, and Mr. T. D. Davy and the Chinese staff of the publishers' Printing Department whose patient work made possible the excellent reproductions of Mr. Gronvold's pictures.

With these thoughts, I leave this little work in the hands of the Shanghai public, hoping that I have not laboured in vain.

E. S. W.

Shanghai, 3rd December, 1929

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GLOSSARY OF SPECIAL TERMS USED BY SPORTSMEN

ALTHOUGH this book is not primarily intended for the use of sportsmen, I hope many of them may find something of interest in it: as they have been somewhat scantily catered for in the list of birds, I offer them a list of words which may help to settle some of their arguments—if indeed, it does not give rise to fresh ones!

A *flock* can be applied to any large number of birds banded together but not to a family party of young birds where special terms such as brood, covey, etc. are applied. The word *flight* is often substituted when the birds are flying.

Special words applied to family parties are:—

Nide of Pheasants (from Fr. *nid*, a nest)

Covey of Partridges (from Fr. *couver*, to brood); this is also sometimes used of Quail.

Sord of Mallards.

Other words are of a descriptive character, giving an idea of the occupation or habits of the bird, thus:—

Gaggle of geese on the water (because of the noise).

String or *skein* of geese when flying because of the order of flight.

Team of Duck when flying.

Paddling of Duck on the water.

Whisp of Snipe when flying.

Walk of Snipe when feeding.

Many other words are applied as the result of ancient custom or merely for the sake of euphony, such as:—

Bevy of Quail or Larks.

Company of Widgeon.

Herd of Swans or Curlews.

Dopping of Plover.

Desert of Lapwing.

Sedge of Herons.

Spring of Teal (and sometimes Snipe)

Finally there are a few purely descriptive words used of birds in flight, such as *bunch* or *knob* (these being generally applied to Widgeon), or in cases where the other special words such as *string*, *skein* or *whisp* would not apply.

INTRODUCTION

The Study of Birds

Out of all the rich realms of Biology, which is the science of all things that live, there is no doubt that the small section devoted to birds has taken a firm hold on the popular imagination, and yet it is a fact that the scientific study of birds, known as Ornithology, has been extremely slow in its progress, even though such progress might be deemed rapid when compared to that made in other branches of Biology.

Some of us are attracted by plant-life and pursue its study under the name of Botany ; others become " bug-hunters " and call it Entomology ; but not one out of a hundred bird-lovers would refer to himself as an Ornithologist. In other words, while there are thousands among us who want to know all about birds, the general demand is for a book which deals with the subject on popular and not scientific lines. To the average man who left his Latin behind with his school days, the sight of a scientific name is like a red rag to a bull, and his cry is " Tell me in plain English what I want to know, and keep your scientific names for museums and places where they understand them." It is sad that such a policy of perfection cannot always be pursued, and it must be one of the objects of this small book to try to explain why a little knowledge of scientific names cannot be separated from an intelligent study of birds.

Popular books on birds in England and America have, however, become increasingly numerous, and many of the authors have made an obvious effort to avoid anything in the nature of scientific arrangement, with at least one unfortunate result, which I will try to explain.

The natural desire for knowledge possessed by anyone who will trouble to read books dealing with natural history must impel

him to increase that knowledge by reading other books on the same subject. No small and readable book, for example, on the birds of China, can attempt to be complete, and it follows that the reader will probably in course of time wish to extend his study to other and more complete books. If his first book has made no attempt at scientific arrangement, the student will be forced to begin his work all over again if he is to understand the more complete and scientific book, for he will find it utterly impossible to " key up " the second book with the first in any one section. That the first rudimentary book must be incomplete will be readily understood when the large number of birds to be dealt with is taken into account.

Simplicity of Classification

According to the latest list at my disposal there are over 1,000 different birds to be found in China, of which perhaps half come our way at some time or another. It would be a test of endurance if I were to attempt to describe all these birds, and I have therefore been forced to take a bold course and select from the mass of material before me a few more than 100 birds which come our way, and to describe these in the simplest possible manner, in the hope that the reader will, like Oliver Twist, ask for more. While simplifying the task in this way, I have, however, thought it advisable to use some sort of scientific arrangement, and at the same time to introduce the more common scientific names, so that the reader may thus be equipped to follow up his studies by reference to other books of a more complete nature. I shall also introduce a short chapter on the subject of the naming of birds, in order to show that these awkward sounding Latin and Greek names are not only necessary for an intelligent study of the subject, but even have some interest when their initial difficulties have been overcome.

A further attempt will also be made to make the book of use both to European and Chinese students, by labelling each bird with the name of its Order and Family, and a numerical reference to the list of Chinese Birds published by the Peking Society of Natural History (Bulletin No. 1). These references (C.B. No.....) will be found to refer to the corresponding bird in the Bulletin, even though it appears there under a slightly different name, and Chinese students will thus be able to read the name and

distribution notes in their own language. For the correctness of those names and notes I cannot vouch, but they at least represent the beginning of an orderly effort to classify birds for Chinese students, both in their own and the English language, so that students of any nationality in China have some common ground to meet upon.

The Fascination of Bird Lore

The fascination of birds has to my mind no parallel in the whole field of Zoology : the rabbit has his burrow, the hare his form, and the tiger his lair, but none of these can begin to compare with the beauty and ingenuity of a bird's nest. The eggs of a bird are among the most beautiful creations of nature, and the marvels of bird migration leave us amazed even in these modern days when man himself has to some extent conquered the dangers and difficulties of the air. What shall we say, then, of the wonders of plumage of such birds as the Paradise Flycatcher, or even the more familiar Pheasant ? And what would we say if we were familiar with the Australian Bower-bird, which, in addition to making an ordinary nest, builds itself a bower as play-ground (sometimes fencing it round) and decorates it with shells and coloured flowers, which are continually changed as they fade. Such marvels as these must appeal to the popular imagination, and when we realize that so little is known, that so much is to be learnt, and that every intelligent observer of birds is the potential discoverer of many of their unknown gifts and habits, it is no wonder that so many people are interested in this fascinating subject.

The Bird in Literature

This popular interest in birds is reflected to-day not only in the many articles written on the subject for such papers as " The Times " (London), but by the frequent introduction of bird-life by popular writers, when describing a particular place or season. Here is an example taken from the opening pages of one of Mr. John Buchan's novels :—

> " The season was absurdly early. . . . The partridges were paired, the rooks were well on with their nests, and the meadows were full of shimmering grey flocks of fieldfares on their way north. I put up half-a-dozen snipe on the boggy edge of the stream, and in the bracken in Sturn Wood I thought I saw a Woodcock, and hoped that the birds might nest with us this year."

The fact that a novelist can (and does) describe to us not only the season, but the general lie of the countryside, by naming five different birds and their actions, is, I think, a sure sign that bird-life has taken a firm hold on our imagination, even though our knowledge of it may be extremely limited.

In England the literature on birds is almost endless, and practically every family possesses at least one popular book on the subject for reference. There are, perhaps, five hundred different birds, both rare and common, to be seen in England, and as regards their mere description and identification the bird-lover has plenty of material to hand. But even in England much remains to be done, and the organized watching of birds in national preserves, the systematic banding of birds to aid the study of migration, and even the Bird Protection Laws themselves, may be said to be in their infancy.

In America much greater strides have been made. The literature is prolific, the unnecessary killing of birds is being reduced to a minimum, and the scientific trapping, banding and watching of birds has been made a matter of national organization during recent years. With the knowledge that birds are a national asset and the friend of the farmer, as well as a mere object of admiration, State aid has been obtained for the study of ornithology, and wide-flung societies are working for knowledge of, and for the good of, even the most humble of the feathered world.

What can I say of China ? Let me begin by saying that here at least is a most fertile soil to work upon, for the Chinese must be classed as one of the greatest nations of bird-lovers. Who can deny this, who daily sees the tradesman, artisan, and humble coolie squatting, cage in hand, " exercising the bird " for mere love of its song? Yet China as a State has not yet made any intelligent effort to protect and encourage bird life. I have been credibly informed that this country has an ancient law for the protection of frogs, but none to protect any bird ; game birds are slaughtered mercilessly and are fast becoming almost extinct in many areas, while even small song-birds are netted for food. To the best of my knowledge there is little or no popular literature on birds, and such as exists has been either written, or at least inspired, by a handful of foreigners in their spare time. Yet, in spite of all this, there is the innate love of the Chinese for all birds,

including even those which do not sing, as a nucleus of hope for the future. The humblest Chinese cottager encourages the swallow to build under his eaves, and he forgives even the mischievous, thieving magpie his many sins.

Books on the Birds of China

Before attempting to explain to the reader the proposed scope and object of this book, it would be as well to refer to the existing literature which deals with the subject ; by this I mean literature which deals solely with the birds of China, and more particularly with that part of China best known to Shanghai readers. This short review will, therefore, exclude any reference to such articles as appear in the " Encyclopaedia Sinica " and the magazines of various Societies, as also the work of really scientific writers such as Dr. Ernst Hartert, whose great work on the Birds of the Palearctic Fauna, written in German, is one of the classics of modern times.

I would add that in my own definition of a " popular " work I mentally include the words " with illustrations " ; and it is not to be wondered at that such books with illustrations are rare, if they exist at all, for the trouble and expense of obtaining and reproducing coloured illustrations in any profusion are such as to deter any but the most enthusiastic amateur.

First and foremost we have David and Oustalet's " Les Oiseaux de la Chine," which is, at the time of writing, the only existing comprehensive and illustrated work on the birds of China. Since this work was completed in 1877 by the great naturalist and missionary, Abbé Armand David and his collaborator, Dr. E. Oustalet, of the Paris Museum, many new names have been added to the list of known birds, and the modern methods of painting and reproduction in colour have made some of their illustrations appear rather crude. However this may be, the book is now practically impossible to acquire, and the few remaining copies are treasured in the leading museums and libraries of the world.

Another French missionary, Père Courtois, has written of the birds of China, and particularly of those represented in the Siccawei Museum, but this book is also in the French language and difficult to obtain to-day.

Coming to the works in English we have Gee and Moffett's "Birds of the Lower Yangtze Valley," first published as a series of newspaper articles and subsequently in book form (1917). The field here chosen is an interesting and fairly wide one, but the fact remains that, lacking illustrations and including many birds which are rarely if ever seen in our neighbourhood, it has hardly filled the gap so far as Shanghai is concerned.

Commencing in 1925, J. D. D. La Touche has published four parts of a comprehensive work entitled "A Handbook of the Birds of Eastern China," but it will obviously be some time before the whole work can be completed. The descriptions of birds are generally scientific in their nature, with a certain amount of explanatory matter written in more popular style ; there are no illustrations, except photographs ; but readers who have mastered the contents of a more elementary book, such as the present work is intended to be, will find La Touche's a most useful book of reference.

Mr. A. de C. Sowerby, in Volume III of "The Naturalist in Manchuria," has described in lucid style a large number of birds which are familiar to us in Shanghai, and it is only the fact that his geographical area does not coincide with ours that makes it impossible for the writer to state that his book supplies exactly what the Shanghai reader wants (excepting always the lack of illustrations common to his and other books). Mr. Sowerby's book is, however, a far more interesting and valuable work of reference to Shanghai readers than its title would suggest.

Mr. George Lanning's "Wild Life in China" (1911) does not call itself a book on birds, yet two-thirds of the matter is about birds and consists of a series of most entertaining pen-sketches of local birds and their habits. Many scientific names applied to these birds have been changed in recent years (as, alas ! they are always changing), and without an alphabetical index or any attempt at scientific arrangement, this work does not supply a modern guide to birds such as many of us have been looking for.

Finally, I must refer to the Bulletin entitled "Chinese Birds," by Wilder, Gee and Moffett, published by the Peking Society of Natural History in 1926. This is nothing but a list of 1,031 birds identified in China ; it contains no illustrations and no descriptions, but only notes as to distribution. This is the first attempt to

give such information side by side in English and Chinese, and as such it must be welcomed as a valuable work of reference and a pioneer in the field of bi-lingual endeavour. As stated above, I have thought it wise to refer all birds described in the present work to the appropriate number in this list of "Chinese Birds," so that any Chinese readers may have a reference to existing notes and names published in their own language.

With the above list of books before me I have decided to publish this modest illustrated work under the title of " Shanghai Birds," in the hope, and I might almost say the firm belief, that the city of Shanghai is now large enough to support a work of this nature. The residents of this city, both foreign and Chinese, who speak or at least understand the English language, have no handy guide to which they may turn to identify the birds around them. If I can fill this gap with any reasonable efficiency I shall be abundantly content, and perfectly willing to leave it to others far more competent than myself to provide the scientific text-books which actually add to the existing knowledge of the birds of China.

Defining the Birds of Shanghai

Having decided to write about " Shanghai Birds," the first difficulty is to define what that title means. For example, if I include a Dusky Ousel, which may be seen only during a few weeks in the winter, critics may ask by what right I adopt this Ousel as a Shanghai bird. On the other hand, if I omit it, the first man who sees half-a-dozen of these birds hopping round his lawn in search of worms will charge me with the omission if he cannot find them here described.

A title which would adequately meet the situation would be " Birds to be Seen in and around Shanghai, including the more common residents, visitors and migrants," but such a title is, to say the least of it, clumsy, and we shall do better with the shorter one. I may add that in the Bird Gallery of the Natural History Museum (South Kensington) there is a large case bearing the label " London Birds," so that we have a well-established precedent in support of an effort to provide the residents of Shanghai with some guide to the birds they are likely to see under a short, though quite unscientific, title.

Birds, by reason of their natural mobility, are most difficult to confine even in theory to any one locality, and this is probably one of the basic difficulties striking at the root of bird study by the average amateur whose spare time is limited. The scientific writer, finding himself forced to set some geographical limit to the sphere of his endeavour, yet anxious to make his work scientifically complete, will include in his lists such entries as " casual vagrants," " stragglers," and birds whose appearance in the area concerned has only once or twice been authenticated ; but not content with this, he will leap his geographical boundaries and follow the distribution of the birds through the two hemispheres, to the final confusion of the beginner, who is really only anxious to learn the main differences between a thrush and a shrike, or a tit and a warbler, or, in fact, any other birds which may commonly be seen in his own neighbourhood.

One further limitation to the meaning of " Shanghai Birds " must be explained. It will be the main object of this book to describe what are scientifically known as the *Passerine* or Perching Birds, since these are undoubtedly the birds of our fields and gardens, and I shall include with these some familiar birds belonging to other scientific orders, such as the woodpeckers and the waders. But as time and space enforce a limit, I shall exclude all the rarer ducks and geese and birds of the sea-shore ; of the latter, I shall, however, include such as are sufficiently common as to obtrude themselves on our notice when we are travelling by land or water anywhere in the neighbourhood of Shanghai.

Pictures by a Famous Bird Artist

When considering these remarks concerning the objective we have before us, the beginner should bear in mind, for his own encouragement, that the value of learning to identify, say, twenty different birds in any one locality, is not limited to the knowledge so gained. Thus, if the reader will learn to identify by shape, size and plumage, let us say, *a red-backed shrike, a pied wagtail* and *a lesser grey tit,* he will quite unconsciously have equipped himself to identify any other shrike, wagtail or tit which he may meet in other parts of China, or even the world in general, merely by adding a little local knowledge wherever he may find himself.

The illustrations must be the key-note of a book of this nature and the reader will be interested to know that every picture now published has been especially painted by that famous bird artist Mr. Henrik Gronvold. Each figure has been drawn and coloured from a skin in the British Museum collection, and each skin was selected as being that of a bird collected either in Shanghai or as near thereto as possible. But for the care and patience of Mr. Gronvold and the expert assistance of Mr. Usher, of the British Museum staff, this task would have been almost impossible, for it is no mean accomplishment to depict accurately in London the bird-life of a city ten thousand miles away.

With these introductory remarks, I must now present this book to the reader for better or for worse. The first part will be found to contain a few chapters intended to show how living birds may be identified by sight and sound, and how their scientific names are arranged, together with a chapter on bird migration which I offer with all due deference to the special authorities on that subject. The second part contains the descriptions of something over one hundred birds, of which about seventy are illustrated in the coloured plates. In these descriptions I have avoided as far as possible all scientific phraseology, in the hope that by so doing any loss of scientific accuracy will be more than made up by ordinary lucidity from the point of view of the average reader.

PART I

Chapter I

THE IDENTIFICATION AND OBSERVATION OF BIRDS

There are two distinctly different ways of studying birds and bird life. One is the way of the serious collector who uses a gun and records every bird killed in the minutest detail; the time and place of collection; the plumage in full detail according to sex and season; the apparent habits and occupation of the bird at the time of its killing; the contents of its crop, and many other details, particularly including the colour of what are known as the "soft parts," the eye, the bill and all uncovered skin which will fade and perish when the pelt is dried. This is the method by which scientific knowledge is gained, and it is only by the comparison and collation of such details that birds can accurately be described for the purposes of scientific works.

The other method is that of the ordinary bird-lover who studies birds in their natural haunts without any thought of "collecting" them otherwise than in his memory. This is the method to be dealt with here.

Garden Aids to Study

The best place to begin this study is in your own garden, and the first step towards good results is to encourage birds to come there. Plenty of trees and shrubs are a great help, and the absence of cats is a thing to be desired. Since many may be discouraged by the idea that trees "take so long to grow," I would like to mention an

experience of my own. Eighteen months ago I had a small piece of land added to my garden and decided to make it up into a miniature bird sanctuary for observation purposes. I planted a number of willow and ash trees (as tall as I could get them) and filled in the space below them with various bushes, leaving nature to do its part with weeds and tangle such as birds love. This year the golden orioles are coming regularly to play in the willow-trees, while the woodpeckers sound them for borers; the hawfinches prefer to wish me "Good-morning" from the ash trees; and now a pair of bulbuls have nested in a Judas bush, and I am daily expecting to see the fully-fledged young feeding in the garden.

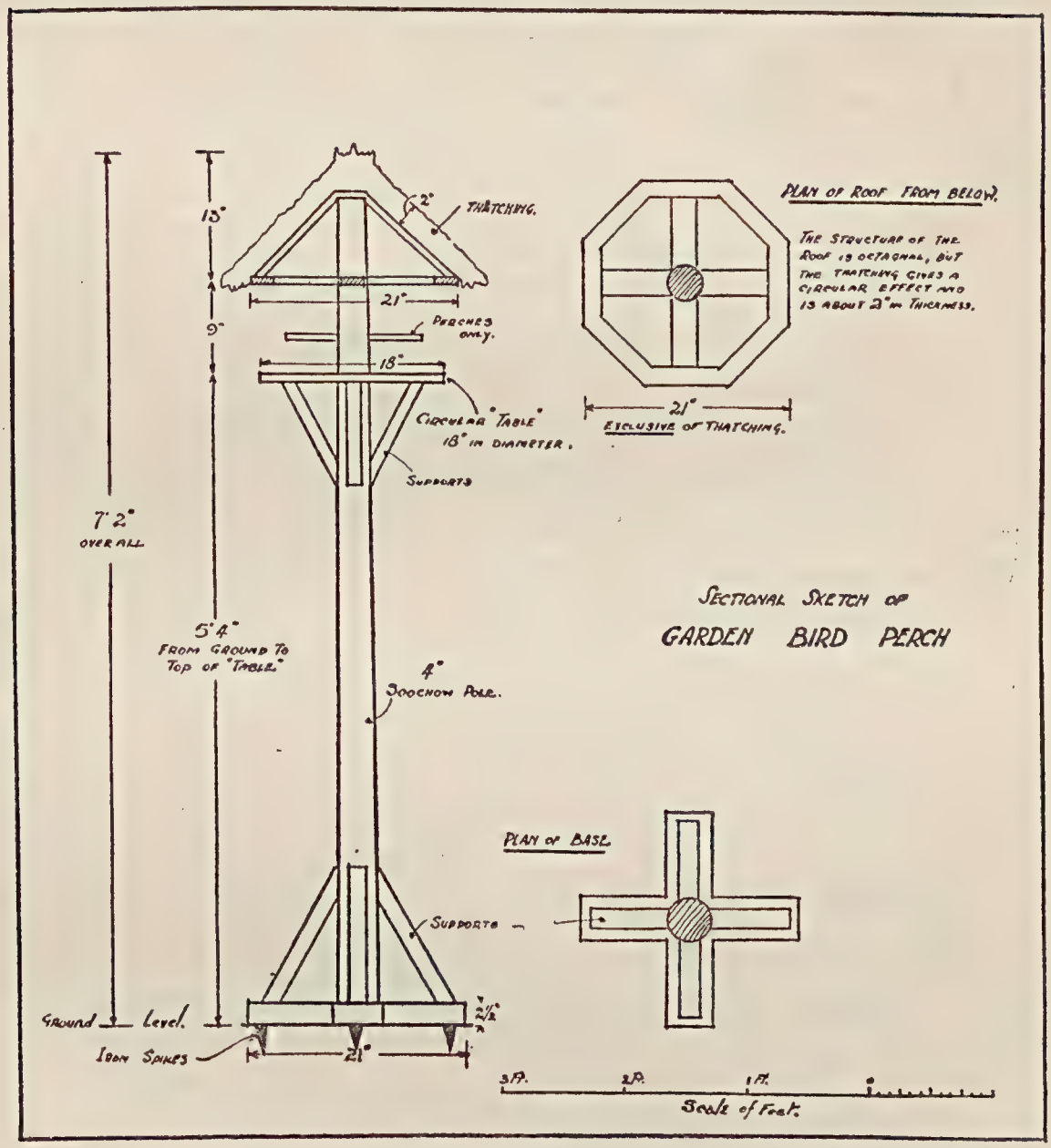
Bird Tables

As an artificial aid you may use a bird-table on which food can be placed, and such a device can indeed be used in the very smallest garden where trees and shrubs can find no place. This table may consist merely of a piece of board stuck up on a pole, so that the birds may alight on it to eat crumbs and scraps. For those who wish to provide something more elaborate I am including a sketch of a thatched bird-table which is much used in England, and which is quite ornamental as well as useful (see page 3), the thatching of which can be done with either straw or reeds. In addition to the usual crumbs, etc., you may place among the supports below the table split cocoanuts and pieces of suet, which will attract such birds as tits during the colder months. The bird-table is, of course, of greatest use in winter, when natural food is scarce and the ground often frozen.

Bird Baths

A bird-bath is always an attraction, and this should be a shallow receptacle containing water not more than an inch deep so that the birds may use it for bathing as well as drinking. This is a great favourite with birds all the

summer; and even in the winter, if you keep it clear of ice every day, you will be surprised how many birds come to drink and even to bathe. We must remember that frozen ponds and creeks cut off the birds' water-supply.



See Page 2

THATCHED BIRD TABLE

Place these lures in an open position so that your feathered visitors may have a clear field of vision for avoidance of their natural enemies, and you will soon begin to attract all the more common birds. You may, of course, be annoyed to find you are providing free comforts for the impudent and ever-present sparrows, but they will in turn

be driven away by other birds, and the process will often be found most amusing. The bulbuls will drive away the sparrows ; the shrikes will scare away the bulbuls; and the magpies, when so inclined, will put to flight all comers. All kinds of birds, both large and small, will take their turns, and even the act of their drinking from the bath will give you food for thought ; the smaller birds will dip their bills and then raise their heads to swallow each drop, but the doves will dip their beaks and suck the water up.

Having once attracted birds to your garden, you will soon begin to know them, and the process of seeing and identifying them as you walk abroad will become less difficult every day.

Near your favourite seat in the house or verandah, where you get a good view of the garden and surrounding trees, keep a pair of field-glasses and turn these upon every bird you see, either stranger or familiar friend. In this way you will observe many details of plumage which are invisible or blurred to the naked eye. The value of the use of field-glasses in observing birds cannot be over-estimated, and the greater part of the details given in this book have been first noted by me in this manner.

Field Observations

I have so far dealt only with the observation of birds in the garden, but you will of course get your more important observations in the open country, for there the variety of the birds will be far greater. Everyone will develop individual methods when in the field, but I would just mention one or two things. Do not be discouraged if you do not see many birds at first, for this comes a great deal with practice; follow up "sounds," and you will soon get "sight" ; keep a small note-book in diary form, and enter every day the birds you see and any important or peculiar facts relative to them or their actions ; note particularly the *first* and *last* days on which you see non-resident birds (*e.g.*, swallows, orioles, cuckoos, etc.), and

this will help you in following migrations; last, but not least, if you see a certain bird in a certain place one day, and want to see it again, remember that if you walk back to the same place, at about the same time, the next day or the day after, you are very likely to see it again, for birds often stick to the same feeding places. For example, I got very close to a little Siberian flycatcher feeding in a hedgerow one morning, and, being puzzled about certain details, went back the next morning to see if I could find him. There he was, and for four mornings running I watched that little bird as he flitted from bush to bush, only moving when I got within three paces of him. On the fifth morning he was gone.

There need be nothing strained or artificial about your observation of birds either in the garden or when walking and riding; it is more a matter of habit which, once acquired, makes you suddenly realize that you are seeing birds that you never saw before, and incidentally noting more detail than you ever noted before.

Having taken a mental note of the size, shape and colour of a bird, you are well on the way to being able to identify it from a book of reference; but while taking in these details you should also try to note the general habits, such as what it is eating, how it flies, whether it walks or hops, and what sounds it makes, as all these details may be of use in determining its species. For example, you may see a medium-sized bird with black plumage, but not near enough to observe any other details, such as the colour and shape of the bill; you may have noticed, however, that it was running and hopping, in which case it was probably a blackbird; whereas if it had been *walking*, it would probably have been a mynah. You may see on your lawn a light-coloured bird with some black or dark markings on head, wings and tail, and being too far away to distinguish the colour, you may think it is an oriole; but this *must* be a mistake, because an oriole *never* feeds on the ground—so your bird must be a shrike, for our shrikes, while not

being birds which spend much time on the ground, may certainly be seen there. That example is a little out of the ordinary (for one must be a long way off not to be able to distinguish these two birds by colour, shape, etc.), but it certainly shows how the noting of *habits* can assist in identification.

Recognizing Bird Families

This noting of the general habits of a bird is extremely instructive, and a moment's thought will show how even the common names of some of the families will give a clue to their habits when seen in action, as, for example, the woodpeckers, the flycatchers and the wagtails. Unfortunately, this descriptive type of name has not been applied to the majority of birds, but a little patience and practice will soon enable you to recognize to what family or group any bird belongs (*e.g.*, a thrush, bunting, or dove), and you will then have the field narrowed down to such an extent as to make actual identification from a book of reference comparatively easy. It is with this object in view that all birds will here be found (as in most books) grouped with families, so that once you have grasped the general appearance and habits of, let us say, a wagtail, you will be able to identify any particular wagtail by looking up that group.

But it is not merely with the identification of your bird that your observations should begin and end. Having satisfied yourself as to identity, you should then begin to study the daily life of the bird, the sounds it makes, the way it feeds, and the times of its coming and going. You should learn to distinguish between the two sexes, the young and the old, and not miss any changes in plumage during the four seasons of the year. Having learnt to do this, you will be on the threshold of a real knowledge of bird life.

Observe Rather than Collect

I must here ask permission to digress for a moment to point out to the reader how much more valuable work he

can perform by watching living birds than by creating dead ones. I can say without fear of correction that the killing of birds for scientific purposes has been greatly overdone in past generations, and that badly stuffed and wrongly described specimens in the " village " museums of the world are the only monuments to the misplaced zeal of their collectors and to the lost lives of the victims. Even the collection of bird's eggs has been greatly overdone, and for every blown egg existing to-day there have been tens of thousands which have perished with the enthusiasm of the collector, and their forgotten dust is all that remains to take the place of the bird life destroyed. The time has now come when all who are interested in bird life can better serve the scientific world by scientific, or even merely intelligent, observation, than by collecting birds and their eggs. There are even in China quite sufficient qualified field naturalists to keep the museums supplied with specimens, and there is not one amateur in a thousand who can adequately deal with the specimens he may obtain to give them any scientific value.

The intelligent bird observer can, however, combine service to science with his own amusement by noting carefully the habits of all wild birds. There is a remarkable lack of knowledge, for example, of the time of arrival and departure of many visiting birds in China ; of the range of various resident birds between their roosting and feeding places ; and of the routes taken by various migrating birds over land and sea. The period of incubation of eggs, even among the most common species, is almost unknown; and here is a fascinating occupation ready to the hand of the most enthusiastic bird-nester. If you would serve the scientific world, instead of hindering it, select a number of nests and visit them daily during the breeding season ; note the date of the laying of each egg, the date of hatching, and the date upon which each bird becomes fully fledged. A collection of data of such a nature would be invaluable.

The plumage of birds and its seasonal changes are fairly well known to scientists, but certain problems still remain, one of which is referred to in the case of the paradise flycatcher. Knowledge of the duties of either sex in the building of nests and the incubation of their eggs is still subject to many gaps, and forms an interesting subject of study.

Curious Features of Bird Life

Certain curious features of bird life are still merely matters of conjecture, and I need here only note one of these as an example. The natural tendency of many birds to congregate in colonies or flocks is well known (though even here there are many gaps to be filled), but it is not so well known that one kind of bird will often arrange deliberately to live under the protection of another kind, though the latter is not consulted in the matter. For example, it has been found in Europe that a certain kind of wading bird will always make its nest in the vicinity of the nest of a ptarmigan. The reason for this proves to be that a certain predatory gull will always steal the wader's eggs, but the fierce ptarmigan will drive away the gull at sight; hence the weakly wader has learned to make her nest wherever she can find the ptarmigan nesting, so that the latter all unknowingly becomes her protector. This habit is generally known as Commensalism (a word suggestive of two different beings eating at the same table), or Symbiosis (signifying living together), and I have no doubt that we could find many interesting examples of this in our midst if we only studied our local birds. I already have a suspicion that the building of certain nests, such as the oriole's, the hawfinch's and the blackbird's, in close proximity to each other may be connected with this habit, but I need many more observations in many different places before I can formulate a theory.

I think enough has been said to convince the reader that the observation of birds is one of those fascinating

subjects which must appeal to any lover of the open air, and is at the same time a subject in which much work remains to be done. Finally, that much more can be done by studying the living creature than by creating more material for a mediocre bird-stuffer.

Identifying the Bird with the Picture

The reader who decides to follow my advice and limit his studies to the observation of living birds may naturally ask how a beginning is to be made; in other words, how can anyone begin to use pictures and descriptions when he does not know what he is looking for? My answer will be to introduce next a chapter giving a short (and quite unscientific) description of our most common birds arranged alphabetically for easy reference. If the beginner will have the patience to read this list through (referring to the plates mentioned) he will probably find that he recognizes without any doubt more birds than he thought he knew, and it will then be only a question of remembering the names, so that he may subsequently look up and identify other birds of the same kind. There will, however, probably be a number of birds of which he is doubtful (though he thought he knew them), because, on looking up the plate, the colours look different or the plumage is brighter and more varied than any he has ever seen on any local bird. At this point I fear another digression must be made before the promised descriptions are commenced, for there are undoubtedly difficulties to be faced in the application of bird illustrations, which I will now try to explain.

To put a long story into small compass, there may be a great difference between what your eye sees and records when it gets a hasty view of the living bird, and what you see when you study a picture. The artist paints every visible detail from a perfect and clean skin at close quarters in a good light; you get a hasty glance of what may be a soiled or bedraggled bird in a light possibly too

dull or too bright, and at a distance which makes it impossible to take in *detail*.

Again, the sheen on a bird's feathers requires close quarters and a perfect light to be seen. You may get close enough to a kingfisher to see the very bright sheen on his feathers, but I doubt if you will ever see the blue on a magpie's wing and the distinct green or purple sheen on his tail. All you see is a black and white bird (unless you get close in a very strong light), yet the artist shows you, quite correctly, the blue wing-feathers and a bright green sheen on the otherwise black tail.

There are also slight faults in reproducing some shades of colour, for certain pale shades of grey and buff are apt to look more like white by the time they are seen on the printed page. It is, however, unnecessary to enlarge on these difficulties, and with this short explanation I am sure the reader will learn to translate pictures into terms of his own vision, and to take neither coloured reproductions nor the hasty records of his own eyes too literally.

A BIRD TABLE

Corner of a small bird-sanctuary in the author's garden (Shanghai). Note the thatched feeding table for winter use. A plan of this table is given on page 3.

Chapter II

A SHORT LIST OF COMMON BIRDS BRIEFLY DESCRIBED

Note: All measurements of length here given are taken from the tip of the bill to the tip of the tail, which is not of necessity the longest measurement of birds, such as herons, having long legs and wide wings.

Blackbird.—An entirely black bird, about $10\frac{1}{2}$ inches long, with a yellow bill; the female is more brownish-black and the young birds have buff streaks, etc., on their breasts. The blackbird is a real Thrush and will be found described with that family: he feeds almost entirely on the ground and always runs and hops as he searches in the grass for worms (*see* Plate VI).

Bulbul.—A greeny-grey bird, about 8 inches long, with a black cap and a big white patch on the back of his neck like a neck-cloth. When he is not singing his cheerful little song, or stealing fruit or pursuing birds bigger than himself, he will fill in his time catching flies on the wing (*see* Plate V).

Buntings.—These are sparrow-like little birds, 5 to 6 inches long, usually with brown and black streaks in their plumage and often with white feathers showing below their tails; some have much gayer plumage, as you will see from Plate XIII.

Coot.—A black water-bird, about 16 inches long, with a white frontal plate running from the base of his beak to the top of his head: hence the phrase "Bald as a Coot" (*see* Plate XXI).

Crows.—Large black birds with harsh voices. One of them has a white collar round the neck and breast and is known as the Collared Crow. The Rook is our most familiar crow (q.v.). (*see* Plate I.)

Cuckoos.—We have two Cuckoos, but the most familiar is the Indian Cuckoo (about 12 inches long) which flies round calling *kwei-kwei-kwo-kwo,* which some people interpret as "One more bottle." Looks rather like a hawk when in the air, but the flight is fluttering and not graceful like a Hawk's (*see* Plate XVII).

Doves.—There are three kinds of Doves to be seen here. The commonest is the Spotted-necked Dove (about $12\frac{1}{2}$ inches); his general colouring is fusty brown and his tail when spread out looks like a black and white fan (*see* Plate XX).

Ducks.—*See* Mallard and Teal.

Egret.—*See* Herons.

Flycatchers.—None of the plainer Flycatchers will catch your eye, except by their habit of darting out from a tree to catch a fly on the wing; but you might one day see the brilliant yellow, black and white Tricolor Flycatcher (about $4\frac{3}{4}$ inches), and you may see, any summer, the magnificent Paradise Flycatcher, with either pure white or bright red tail feathers about a foot long fluttering out behind him (*see* Plate VIII).

Gulls.—Large birds of the sea-shore, but often seen feeding inland or up river. Our commonest Gulls are white and grey with black wing tips, but you must note that the young birds are nearly always heavily mottled and do not look at all like their parents until their second or third year (*see* description of Gulls, as per Index).

Hawfinches.—Our common Hawfinch is the Black-headed Hawfinch, about 7 inches long; the plumage is varied and the outstanding features are the completely black head and a big yellow conical bill; the *female* has a grey-brown head. These birds are nearly always seen in flocks in the winter and they always fly off together with a curious whirring sound of the wings (*see* Plate XII.)

Herons.—These are the large birds of graceful flight and broad wing-spread which you will see passing overhead during the summer: the long neck is then tucked in to the shoulders and the legs stuck straight out behind. There are five Herons to be seen here, as follows:—

Grey Heron, the largest of all, 38 inches long and chiefly grey in colour.

Night Heron, the smaller of the grey herons, about 22 inches long.

Pond Heron, about 20 inches long, and appears to the casual observer to be all white when in flight. When observed standing at the edge of a pond or creek he will be seen to have the head and neck chestnut brown and long dark plumes down the back.

Little Egret, a pure white Heron about 23 inches long.

Cattle Egret, about 19 inches long, and pure white, except that in breeding plumage he has orange-buff head, neck and dorsal plumes; generally seen feeding in the fields and looks pure white at a distance (*see* Plate XXIII.)

Kingfisher.—This is the brilliant little bird best described by the picture on Plate XVI. He is about $6\frac{1}{2}$ inches long, but a large proportion of this length is accounted for by the big head and long bill. You may see him skimming along any creek, or even across your garden, if you will learn to recognize his shrill cry of "*Pe-e-e-t.*"

Kite.—The large brown and black bird (about 26 inches long) which you see either soaring high in the sky or wheeling over the river in search of offal. The under feathers of the wide wings show a patch of light colouring in the centre, which makes the bird easily distinguished from below. The tail is forked (*see* Plate XIX.)

Laughing Thrushes.—These birds do not belong to the Thrush family, but appear something like them, as the common name suggests. We have two Laughing Thrushes (or Babblers) :—

The *Spectacled Laughing Thrush*, which is about 13½ inches long, chiefly brown in colour and with a dark patch round the region of the eyes. He does not sing, but is very fond of shrieking loudly.

The *Hwamei* is much smaller (about 9½ inches). He is generally brown in colour, and has a narrow white area round the eyes ; he is a beautiful songster, and only too rarely seen and heard in our neighbourhood (*see* Plate IV).

Magpies.—These are fairly large birds, and being members of the Crow family, they have very harsh voices and no idea of singing.

The *Common Magpie* is the black and white bird (about 18 inches long) which you see everywhere in fields and gardens flicking his long tail up and down and generally chattering harshly.

The *Azure-winged Magpie* is smaller (say 15 inches long). You will usually see these birds in flocks, calling harshly to one another ; the general effect is that of a pale azure-blue bird with a black cap ; the body is really grey and the wings and tail blue (*see* Plate II).

Mallard.—This is our common Duck, whose plumage is familiar in the market. The most distinctive features are the metallic-green head, followed by a white neck-ring, and the purple patch on the wings.

Mynah.—This is the local Starling, about 11 inches long. He appears all black when perching or walking, but in flight he shows very distinct white patches above and below the wings, giving something of the appearance of a Magpie with his tail cut short. At close quarters you may note a grotesque crest of black feathers at the base of the bill (*see* Plate XI).

Orioles.—Generally known as Golden Orioles, these are among our most beautiful birds ; about 9½ inches long ; brilliant golden yellow with black patches on the head, wings and tail. The females are heavily washed with green on the back and are not quite so brilliant in colouring as the males (*see* Plate X).

Ousels.—*See* Thrushes.

Owls.—There are plenty of Owls in Shanghai, but we see few of them owing to their nocturnal habits. A small brown Owl called Whiteley's Owlet is here described and illustrated (*see* Plate XVIII).

Pheasant.—Our local Pheasant is a magnificent bird, better studied in the market, where he has to be sold with his feathers on to prove he is a cock-bird (but the embargo on hen-pheasants is sometimes lifted). The male bird is about 22 to 24 inches long, with two very long tail-quills adding about 15 inches to the total length. The plumage is a handsome combination of chestnut, brown, orange and grey, with the feathers barred and spotted black. There is a red region round the eye, and the head and upper neck are iridescent green with a white ring. The female is a smaller and much duller bird, mostly chestnut and grey, mottled with black ; she has no tail extensions.

Quails.—There are two kinds of Quail to be found here, the Common (Japanese) Quail and the Button Quail; these are 7½ and 7 inches long respectively, small birds formed like Partridges, generally brown, buff and pale chocolate in colouring. The Button Quail is smaller, has more pointed wings and a ruddy breast; it is also easily identified by having only three toes.

Rails.—*The Indian Water-rail* is our common representative of the Rails. This is a water-bird and very difficult to find owing to its skulking habits; it is about 10 inches long, with a sharp beak about 1½ inches long: the plumage is olive-brown to black with a grey breast and streaks on the flanks; *the Blue-breasted Banded Rail* is very smiliar in appearance, but slightly smaller (see descriptions as per Index; also *see* Plate XXI).

Redstart.—A robin-like little bird about 6 inches long, with a curious habit of "shivering" its tail. It is black, grey and chestnut, with a distinct oblong patch of white on the black wings (*see* Plate VII).

Robins.—We only have the blue-tailed Robin, and you will only see it in winter and early spring (*see* Plate VII).

Rook.—This is our commonest Crow and usually seen in large flocks: it is 19 inches long, almost entirely black, and is distinguished from other crows by the white patch of scurvy skin at the base of the beak. It soars gracefully in the wind and is known to Chinese as the "Wind-crow" (*see* Plate I).

Sandpipers.—These are of the Snipe family and are often referred to as "Snippets." We have the Common and the Green Sandpiper, 8 and 9½ inches long respectively; Snipe-like birds with long legs and sharp long bills (*see* Plate XXII).

Shrikes.—There are five Shrikes described in this book, but the Red-backed Shrike is our familiar member of the family. A fierce-looking bird, about 10½ inches long, with a distinct black moustache: the upper parts are grey except for the red back, the under parts white with a little rufous washing, and the long tail brown to black. This bird has a harsh call of "*Wark, wark,*" etc., but can also sing sweetly and softly (*see* Plate IX).

Snipe.—There are at least three kinds of Snipe common here as migrants in spring and autumn. The blotchy plumage, grey and white breast, and the long bill are the distinguishing marks of the Snipe (*see* Plate XXII for Common Snipe).

Sparrow.—The Sparrow needs no description, but our House Sparrow is really a Tree Sparrow. Upper parts brown, with black streaks, etc.; chin and throat black; under parts ashy-grey; wings brown, with two pale bands. (Note: there are *no pure white* feathers.)

Swallow.—The graceful and swift flight of the Swallow is first seen in the early spring, and he remains with us for the summer. Our common House Swallow is blue-black, with under parts chiefly white and a deeply-forked tail. About 6½ inches long.

Teal.—We have two kinds of Teal (which are small ducks), the Common Teal, 14½ inches long, and the Summer Teal or Garganey, 16 inches long. The Common Teal has a chestnut-red head with a deep-green band across it, while the Garganey has a white stripe running through the eye and down the nape. The rest of the colouring is chiefly grey to pale buff, mottled and spotted with darker colours.

Terns.—Small sea-birds, with forked tails and sometimes called sea-swallows; pale grey and white, with a black crown. Common Terns are 15 inches, and Lesser Terns 8 to 9 inches long.

Thrushes.—Thrushes, of which many are also known as Ousels, are fairly common, but do not reside with us like the Blackbird, who is a black Thrush and the only member of his family who stays with us to build his nest and sing. The average Thrush is about 9½ inches long and can best be described by illustration (*see* Plate VI).

Tits.—Active little birds with varied plumage and squeaky little voices. We have :—

The *Lesser Grey Tit*, about 5 inches long ; chiefly grey, but with a black crown and a black bib and apron tied round the neck with a black string. The face is white, and there are green and blue shades on the upper back. Often called locally the Tom-tit.

The *Marsh Tit* is smaller, about 4½ inches, and duller in plumage than the Lesser Grey Tit ; but he is chiefly a dull grey in colour and has a black cap.

The *Long-tailed Tit* is nearly 5 inches long and is more generally referred to in books as the Silver-throated Tit. A tiny little Tit with a long tail, he is mostly grey, black and brown, but he has a silvery spot on his throat and paler vinous under parts. You are more likely to recognize him as a tiny little bird with a rather long tail (*see* Plate III).

Wagtails.—These are the slim graceful birds, about 7 or more inches long, which you see flitting over water and always wagging their tails when on the ground. They are always "pied" in their plumage, white, grey and black, but two of them have yellow under parts. We see at least five different Wagtails in the winter, and to distinguish between them we must look up the section dealing with the Wagtail family (*see* Plate XIV).

Warblers.—On being introduced to them by name one would expect Warblers to be great songsters, but they are really more persistent than efficient in their performances. Apart from the Reed-Warblers, which are only seen among the reeds, we have :—

The *Bush-Warbler*, which is a brown bird with a grey to white breast ; he is about 6 inches long and is more often heard than seen. This is the persistent songster who sits on a tree giving an imitation of pouring water from a bottle and finishing up with a high pitched trill.

The *Fan-tail Warbler*, a tiny little buff-coloured bird about 4 inches long, who chiefly distinguishes himself by rising up from the grass with a jerky flight screaming "*Peet-peet-peet,*" and then suddenly subsiding into cover, singing "*Chip-chip-chip.*" The wings work at furious speed, and the little tail is wide-spread as he climbs on the upward flight (*see* Plate VII).

Woodcock.—Fairly large game-birds about 14 inches long, reddish-brown, grey and black in colour, and chiefly distinguished by a very long beak (*see* Plate XXII).

Woodpeckers.—These birds are particularly fitted by nature for the occupation which gives them their name ; the head is large and strong and the beak long and sharp. Our commonest Woodpeckers are

The *Pied Woodpecker*, about $9\frac{1}{2}$ inches long, chiefly black and white.

The *Green Woodpecker*, about $10\frac{1}{2}$ inches long and dull green to olive in general appearance.

Both birds have a shrill screaming cry which may often attract your attention to them (*see* Plate XV).

Wren.—So small and seldom seen as to be hardly worth mentioning (but it is nice to know that we can see a Wren as well as something in the nature of a Robin). A winter visitor only—possibly recognized by the small size ($3\frac{1}{2}$ inches) and the erect stumpy tail (*see* Plate III).

The beginner, having read this list of birds, will recognize some and be left wondering about others; for further details I can only refer him to the Index, and thence to the more detailed descriptions given in the second part of the book.

Having learnt to recognize a number of common birds by sight, the next step is to learn to know them by sound even when you cannot see them. The importance of this aspect of bird study is worthy of a special chapter, which will now be attempted.

Chapter III

SOME NOTES ON THE SOUNDS MADE BY BIRDS AND THE ADVANTAGES OF KNOWING THEM

The importance of knowing the sounds made by birds and the advantage to be gained by such knowledge cannot be overstated. It is quite possible for a sightless observer to know not only what birds are near him, but actually to know what they are doing. I think I can best explain this statement by repeating a story which I believe I have published elsewhere (but with less detail), describing one of many incidents which happened to me when I had the misfortune to be laid up in bed and was quite unable to see more than a small patch of sky out of any window.

Serio-Comedy in Bird Life

A bulbul was singing his bubbling song on a telegraph wire over the road. I knew he was a bulbul because they always seem to me to repeat the Japanese word "Shokuji" (a meal) something like this—"*Shokuji—Shokuji—Shokuji's read-y.*" On the other side of the garden, in a favourite ash tree, sat a little bush-warbler, repeating his famous imitation of pouring water from a bottle and finishing in a high trill. I knew that both birds must have nests somewhere near, and while keeping watch over their mates were entertaining them with song. Then a shrike arrived and sat on the garden fence contemplating the field of action and wondering what mischief he could work.

This was obvious for three reasons: first, the bulbul stopped his song and gave the angry rattle which is both

his warning and his war-cry; second, the bush-warbler abruptly cut off his musical effort and changed it down to a curious kind of "*Jug—jug—jug,*" which gradually expressed his increased anxiety until it was an angry and excited "*Chip—chip—chip*"; third, the identity of the shrike was quickly established by his angry challenge "*Wark—wark—wark.*" Then the drama developed swiftly. The plucky little bulbul decided on a bluff, for I heard him raise his "rattle" to something like a shriek as he hurled himself from the telegraph wire and passed my window, straight as a dart for the direction of the shrike. Guided by the sound, I knew that the bulbul charged at the position of the shrike and, with a final scream, rose suddenly above his head, knowing that the shrike could not strike upward.

The momentary silence that followed proved to my ear that he had brought off one of the world's great bluffs, for the powerful shrike, scared by the fierce attack of his smaller opponent, had not so much run away as suddenly remembered that he had an important engagement over the road. Proof of this was not wanting to an attentive ear, for within the next few seconds the bulbul was back on the telegraph wire, spreading his wings high above his head and giving his triumphal cry of "*Chi-oo—chi-oo—chioo—chioo*" in descending scale (I knew he had his wings spread upward when he said this, because he always does on those occasions). As if to confirm my diagnosis of the case, the little bush-warbler gradually changed the sharp "*Chip—chip—chip*" into "*Jug—jug—jug,*" and before another minute had elapsed he was in full song—again pouring water from an imaginary bottle and applauding his own efforts with a high trill.

Sound Reading and its Application

While a scene of this nature is going on, much additional testimony to the facts is added by the chirping of the sparrows and the alarm notes of other familiar birds, not forgetting the wives of the chief participants in the drama,

but I think enough has been said to show how sound can not only show you what bird is producing it, but also what that bird's occupation or emotions are for the moment.

The reading of sounds thus becomes a habit with the observer of birds, and one practical application of this faculty must not be overlooked. If you hear a strange bird-noise at any particular time or place you can deduce one of two facts: either you have come into contact with some new factor in the life of a familiar bird, or you have come near to an unfamiliar bird. Here is a great aid to anyone desiring to extend his knowledge of birds; for the majority of birds, by reason of their habit of concealing themselves in trees, reeds or other cover, are difficult to see, and it is only the sounds they make, either voluntarily or involuntarily, which can lead us to them.

With these preliminary remarks I now propose to try to describe some of the familiar sounds made by our more common birds, and to condense them on the alphabetical system adopted in the last chapter for greater convenience.

A List of Bird Calls

The following list of birds is based on the list in Chapter III, but excludes certain of the larger birds which are better identified by sight. For example, such birds as the kite, herons, etc., are generally seen flying overhead and need not be sought in cover. Other birds are equally easily identified by sight, but the sounds they make have sufficient interest to be worthy of record, and hence are included. I have also added a cuckoo-shrike to this list because of his striking call, although he cannot be called one of our common birds.

Blackbird.—Being our most familiar and prolific songster, his notes are easily identified, but note that the blackbird seldom uses the "trill" and his music is mostly pure whistling. He sometimes chatters and introduces harsh notes; often he imitates the song of

other birds. His alarm note is a sharp "*T'zik*" or "*T'zik-t'zik.*" In the evening he seems to change this to a more plaintive (or perhaps weary) "*Pic-pic,*" and when you hear this you may know the blackbird is going to bed. (Note: I have found this "evening note" of "*Pic-pic-pic*" more consistently used by the European blackbird in England, but I can also trace it here in Shanghai.)

Bulbul.—One of our most loquacious, and hence most interesting birds, when we are studying sounds. He is so voluble that it is only possible to deal with a small part of his vocabulary.

Song.—Cheerful and bubbling, but lacking variety. It generally consists of "*Shokuji—Shokuji—Shokuji's—ready*"—repeated and varied *ad lib.* These "words" will not convey much to the reader who is not familiar with Japanese. The word "Shokuji" means a meal, and anyone who has travelled in Japan will be able to recognize the sound as reproduced by the bulbul.

Triumph or display.—This is a very distinctive phrase, and may be described as "*Chee-oo—chee-oo—chee-oo,*" repeated in a descending scale (perhaps six or seven times). When this note is sounded, either to display before the mate, or to signal triumph over an enemy, the wings of the bird are always extended and fluttered over the head. The beak is wide open and the bird's whole body quivering.

Anger or Warning.—The sound given as a warning, or used in anger, is a harsh rattling sound, rising in scale and quickening in its beat as the emotion becomes more violent. When the bird is driven to extremes of emotion it becomes almost a scream.

Suspicion.—When he is not quite certain of his ground, he will say "*Churr-churr-chat-chat*" and repeat this phrase with variations until he is satisfied that it is time either to resume his song, or organize another fight.

Buntings.—To deal with them very superficially (they are only winter visitors) I would say they are mostly silent here, but you may hear a sweet canary-like song in the early spring from one of the more common buntings. The alarm-note, which you will hear when you disturb them among the winter crops, is a sharp "*Tzirrip.*"

Cuckoos.—*The Common Cuckoo* of England says "*Cuck-oo*" (as his name would suggest), and when he "changes tune" he says "*Cuck-cuck-coo,*" but I seldom hear him here.

The Indian Cuckoo, our familiar summer visitor, says "*Kwei-kwei-kwo-kwo,*" or as it is sometimes described "*Sau-sau-mei-ho.*" These syllables lend themselves to many interesting translations from the Chinese, but the European ear insists that the bird says "One more bottle."

Cuckoo-Shrike (Black-winged).—This is the bird that keeps repeating a dreary call from the tree-tops in a melancholy minor key. It consists of three or four quickly repeated notes, then a lower note, then one half a tone higher, either or both of the last two notes being slightly drawled. The whole performance is repeated *ad nauseam* until the listener becomes almost exasperated by the sound. I only hear this sound for a few weeks in the early summer.

Doves.—I would describe these as being generally silent birds, but during the breeding season they indulge in much "cooing." The bird of the English woods

is alleged to say "Don't-scold-so-Sophie," but our birds apparently do not know "Sophie," and never get any further than the "Don't-scold," with an occasional extension of the phrase to "Don't-scold-so."

Hawfinches.—These birds having a high conical bill, have the gift of whistling shrilly like a parrot. To my ear their most familiar phrase sounds like "Good-morning-little-birdie" (with the accent on the r's, as if they were Scotch); but remember that their song is always loud and shrill (perhaps like a butcher-boy whistling through his teeth) and contains many trills introduced according to the fancy of the moment. Do not confuse this rather shrill type of whistling with that of the mynah, which has a more mellow note.

Kingfisher.—A very sharp, high-pitched and somewhat drawn-out "*P-e-e-et*" (spelt with about five e's). Get to know the peculiar shrillness of this single note, and you will never fail to find a kingfisher, particularly in the springtime, when excitement is the keynote of the day.

Laughing Thrushes.—Our big brown "spectacled laughing thrush" has a piercing shriek, often broken or repeated in its utterance, which is supposed to give it the semblance of a laugh. Personally, I consider that these birds laugh just about as successfully as a hyæna does. The *hwamei* is also a noisy bird at times, but his gorgeous song, even sweeter and more delicate than that of our local blackbird, is only too seldom heard in these lowlands.

Magpies.—The common magpie is a member of the Crow family and so has a harsh voice. He only says "*Zaak*" or "*Ee-zack*" in different shades of loudness or harshness according to the emotions of the moment.

The *Azure-winged Magpie* is very much like the common magpie in his limited vocabulary, and the harsh sound he produces is exactly what might be expected from a smaller but similar bird. Learn to recognize the sound made by the common magpie, and you will soon recognize the voice of his smaller but more ornamental cousin.

Mallard,—The male says "*Quork,*" the female "*Quark,*" but the male in springtime has a more insinuating cry or "*Treek-treek.*"

Minivet (Black-winged).—This is another name for the cuckoo-shrike (*see* above).

Mynah.—Our local starling is a whistler of no mean merit and has a habit of rolling his r's and introducing a trill into every possible note. His opening call is usually "*Who-rr-you,*" and sometimes the sound can better be described as "*Whee-you.*" His whistle is always more mellow and less parrot-like than that of the hawfinch (*q.v.*). He is also a great imitator of other birds or of any common sounds, so you never know what to expect next; *but remember* that this bird rolls his r's like a Frenchman, and if you happen to be a French scholar you may read his phrase of "*Who-rr-you*" as "toujours" (pronounced in the French manner).

Orioles.—The orioles have two distinct calls; the first is the signal or alarm note, and this consists of a mewing sound which could better be attributed to a cat; it is used by both sexes. The song of the male consists of a few deep, mellow and flute-like notes which are hard to describe. They are deeper and softer than those uttered by any other bird, and sound as if they came from a wooden instrument. The sound might be written "*Who-you-who-you-whoo,*" sometimes shortened to "*Who-you-who.*"

Owls.—It is a great mistake to think that owls say "*To-whit-to-who*" (or whatever it was that some misguided naturalist told the originator of our fairy-stories and fables). The cry of most owls consists of "*Kiew-kiew*" or "*Kiew-whoo,*" or sometimes of the sound that might be made by a whip-lash drawn through the air. We have not many night birds to deal with, and you may soon recognize the cry of an owl if you will only forget what you were told in your nursery books.

Pheasant.—A syncopated crow, like "*Koch-koch.*"

Sandpipers.—We only hear the alarm-cry, a long-drawn "*chee-ee-t.*"

Shrikes.—I will only deal with our common "red-backed shrike," but you may apply many of his characteristics to his cousins. The common war-cry is "*wark-wark-wark*" and this generally embellished with a final note that sounds like "*Beat-it.*" The birds also have a habit of repeating the "*Beat-it-beat-it*" cry when flying low from one perch to another. The shrike also has a sweet and varied song, heard mostly in the spring and summer. It is never very loud or full-throated, and gives you the impression that the bird is singing only for his own entertainment. Note that a shrike nearly always chooses a high and prominent perch to call from.

Sparrows.—An old story alleges that the sparrow said "*Cheap-cheap*" when run over by a certain kind of motor-car. I hate to spoil a good story, but I am certain that the bird's last words would have been "*Tsi-tsi*" or "*Tsik-tsik*" since those are the sparrow's calls of alarm or anger. These, with variations of "*Cheep*" and "*Chip,*" represent his whole vocabulary.

Swallows.—A thin piping scream when on the wing, but not a clearly defined "*Peet*" like the kingfisher's. When perching the birds sometimes indulge in a modest and very soft attempt at a twittering song.

Teal.—The *male* gives a low "*Krit-krit,*" which may be heard from a considerable distance; the *female* says "*Quack*" very sharply.

Thrushes.—Always excepting the blackbird, the thrushes are silent when they visit us and you will never hear one sing. The alarm-note is a sharp *t'sik* very like the blackbird's.

Tits.—To the best of my knowledge, the silver-throated (long-tailed) and marsh tits are content with a sharp squeak uttered in varied pitches, and have no song. The lesser grey tit squeaks too, and when angry this becomes loud and drawn-out something like the noise made by a "scissor-grinder." In addition he has a somewhat squeaky and high-pitched little song, something like—"*Pitsy-wee-pitsy-berry-chew-pitsy-wee.*"

Wagtails.—The wagtail calls generally in flight and he has a way of alternating one long with two short sounds, thus: "*pēēt-Pĕĕt-pĕĕt* or *pĕet-pĕet-pēēt.*"

Warblers.—*The fan-tail warbler* is the tiny little bird which rises in sharp jerks with a shrill "*Peet*" at every jerk; this call is so sharp and metallic as to sound sometimes like two coins being clinked together. When he drops into the grass the call changes at once to "*Chip-chip-chip.*"

The *bush warbler's* "song" has been described elsewhere—throaty notes like the pouring of water, followed immediately by a higher trill. When first alarmed he says "*Jug-jug-jug*" and this changes to a sharp "*Chip-chip-chip*" as anger increases. The

female when alarmed says "*Chip-chip-chip*" very sharply, and repeats this continuously at furious speed. The song of the male is translated by some people into the phrase "*Oh-oh-oh-oh-Richard.*"

The *reed-warblers* have a very harsh little song which is seldom heard here and which is not distinctive.

Woodpeckers.—The *pied woodpecker* gives a high-pitched scream with something of a trill in it. He it is who makes the far-sounding rattling noise with his bill when testing a hollow branch, something like a low-pitched wooden rattle heard from a distance.

The *green woodpecker* gives a very loud and high-pitched scream without any trill in it.

Wren.—A very small squeak, like a tit's, with no attempt at song here.

The above list of sounds is much longer than I had intended it to be, but I am afraid, even now, that the reader will have to fill in many gaps and make his own translation of the sounds to tune in with his own ear.

It must be remembered that every kind of bird has a very definite pitch of voice which seldom varies as between one bird and another of the same species, so that once you have learnt to distinguish the cry, say, of a swallow from that of kingfisher, you will never mistake one for the other, even though any attempt to describe the distinction in words may prove most difficult.

Before closing this chapter I would like to describe one further incident which occurred during an illness to show how sounds, or even the absence of sounds, can tell us what is going on among the birds around us. I knew the exact position of a bulbul's nest in my garden, and also knew that in a few days (as nearly as I could calculate) the young birds would be ready to fly. One day I told my wife (acting nurse) that I was sure the bulbuls had gone, and asked her to go and find out, as I feared the young had

been stolen. She returned to tell me my fears were justified, and that the gardener reported " yesterday have fly away " (which I believe to this day to be his polite explanation of the fact that the birds had been removed for sale as cage-birds). Being finally asked how I could possibly know, while lying in bed, that the birds had gone, I felt almost ashamed of the simplicity of the explanation, which might otherwise have made a good " second-sight " story. A maurauding magpie had just that minute announced his presence in a tree near the bulbul's nest, with his unmistakable war-cry of " *Zack-zack,*" etc., *but there was no sound of any sort from the bulbul's bush !* Had the bulbuls been there with their young, the language would, to say the least, have been unfit for Billingsgate Market.

Chapter IV

THE NAMING OF BIRDS

This is a subject dry as dust in its application, but far from devoid of interest if we consider its origin and history. To get some idea of the difficulty of giving birds a common name by which they can be recognized by any ornithologist in any country, let us take the example of a bird which breeds in the far north of Europe, and then, as winter approaches, migrates south, and perhaps west, passing over Norway and the British Isles, and various countries in Europe, and finally arrives in Africa : on its way it will land to feed and rest, and so will be recognized *and spoken of* by the people of perhaps seven different countries. Nor will the variety of its names end there, for even in different parts of the same country it may have entirely different names applied to it. A good example of this is supplied by the missel thrush of England. In that country alone it is also variously known as mistletoe thrush, holm thrush, holm screech, throstle cock and storm cock, and perhaps many other names which I do not happen to know ; incidentally the French call it " draine " and the Germans " schnarre," and so the endless variety of names goes on.

A further confusion in names is due to the quite natural tendency of any non-scientific observer to apply the name of any well-known bird to an entirely different bird which happens to look something like it. The best example of this arises from the English robin, famed for his red breast. When the English first went to the American continent they missed their favourite red-breast, but found a fairly

large thrush of friendly habit which also had a red breast, and so called it a robin; and to this day the American "robin" is in reality a member of the thrush family *(Turdus migratorius)*.

The Linnæan Classification

With all these difficulties to be faced, scientific writers since the days of Aristotle have made many efforts to classify birds (as well as plants and animals) by using Latin and Greek names; but each writer adopted a plan of his own, and none of these plans ever seemed to coincide with the ideas and plans of subsequent writers, with the result that no real progress was made until the arrival of "Linnæus" (1707-1778), this being the Latin name adopted by Carl von Linné, the great Swedish naturalist. It is interesting to note that he intended following his father in the Church, but made such poor progress with his studies that his parent was advised to apprentice him instead to a shoemaker; but Linné's passion for botany saved him from the dull life of a cobbler, and as a result of his natural inclination he started on the career of writing and lecturing, which finally made him the greatest naturalist of that or any other age. Beginning with botany he finally systematized the three kingdoms of nature, and his system, if not all his names, endures to a great extent until the present day. The secret of his success was simplicity and terseness, which took the form of giving two names only to every living thing: first the genus (generic name), then the species (specific name). In other words, applying this system to birds, we first say what *kind* of bird it is, and then add another word to describe the *particular kind* or *variety*: it is as if we first call a man Smith and then add the name Michael to distinguish him from the other Smiths. Thus, taking an example on page 63, having decided that a bird is a crow (*Corvus*), we add the word *torquatus* to tell you it is a "collared crow."

This great binomial theory perfected by Linnæus sufficed for many years, but soon became complicated by the creation of various new names by different authors, who found, or thought they had found, creatures which had not been classified by Linnæus. Ornithology must, by the very nature of birds, be an international study, and it was not until after many years, when an international body took the matter up, that any daylight came to lighten the confusion caused by the writers of many different countries who were trying to improve on the work of Linnæus. The Commission appointed by the International Congress of Zoologists finally adopted one great rule, which is known as the Law of Priority: that is to say, beginning with the great work of Linnæus published in 1758, the *earliest* name applied to any bird (or other creature) was the name to be adopted. This sounded fair and reasonable, since it ruled out so many inventions of modern writers and yet gave credit to anyone who had really *first* added to the lists prepared by Linnæus; but this rule in its turn led to further confusion, for pedantic ornithologists with nothing much to do spent their spare time unearthing ancient lists and catalogues merely for the joy of finding an older (and therefore a new) name for any given bird. Others pointed to a later edition of Linnæus' work (1766), which contained many alterations, and asked why these were not adopted, and so the differences and quarrels went on and continued, perhaps in a milder form, until the present day.

The Trinomial System

A further complication in the naming of birds was caused by the introduction of the trinomial system. The reason for this is that more recent study of birds has proved that certain species, while being the same in kind and variety, have slightly changed in some characteristic, such as plumage, owing to change of geographical situation. This calls for the addition of a third (sub-specific) name to make the whole name complete. The majority of birds are

now referred to by three names, but where there exists a perfectly good "binomial" which describes the bird without fear of confusion with any other bird, it is often preferred.

The repetition of Latin words, either in the binomial or trinomial system, simply means that under the laws of priority the generic, specific and/or sub-specific names are the same. Thus the common hawfinch of England is known as *Coccothraustes coccothraustes* to those who prefer the binomial, but as *Coccothraustes coccothraustes coccothraustes* to those who prefer the trinomial, and this latter name serves to distinguish the bird from the common hawfinch of the Far East, which is known as *Coccothraustes coccothraustes japonicus*. These distinctions and repetitions sound very confusing to the beginner, but if only scientific writers would agree upon one system, and stick to it, confusion would soon disappear.

In the present state of doubt and trouble most writers are not content with one scientific name, and they seldom mention any name without giving an authority. They usually begin by choosing the name they approve and then add to it *in different type* the name (or a contraction of the name) of the authority who first gave it: thus, "*Corvus torquatus* Less." means the collared crow as named by *Lesson*, and where the naming of Linnaeus is followed, it is usual to add the syllable "Linn."; if the author adopts a name which follows the specific name of any authority, but places the bird in a slightly different group, it is usual to add the name of the original authority in brackets, thus, (Linn.). Having thus chosen a given name and referred to its authority, it is the common practice to add below this any other known but non-valid names for the same bird, such names being referred to as *synonyms*.

This complete system of quoting authorities and adding synonyms is very muddling to the beginner, and in this elementary book I have attempted only to give such name as will be most likely to assist the reader in identifying the bird with names given in other local books, such as

those of La Touche and Gee and Moffett. In certain cases when I have found a slightly different name used in the British Museum I have accepted their classification, and in cases where I find the bird given different names in local books I have used both as alternatives ; I have not quoted any authorities for scientific names and must leave the reader to work all that out for himself, if he is so inclined.

Reference has been made elsewhere to the system here adopted of referring each bird to its appropriate number in the list of Chinese birds prepared by Wilder, Gee and Moffett, and reference to that list will give the reader not only the Chinese name, but possibly a different scientific name which has been adopted by those writers. (*See* C.B. numbers at the top of each description.)

Orders and Families

Before leaving these troubled waters of bird nomenclature, I must make some reference to the orders and families. Birds as a whole are known as Aves, and these are then divided into orders : the orders are based generally on anatomical peculiarities which have some direct bearing on the daily life of such birds as are embraced by the order : thus the *Passeres,* or sparrow-like birds, have feet more or less perfectly adapted for perching on trees ; the *Pici* (woodpeckers, etc.) are peculiarly adapted for gripping the bark of trees and pecking wood ; the *Striges* (owls) not only have powerful claws for gripping their prey (as also have the *Accipitres,* the diurnal birds of prey), but also have eyes particularly constructed for seeing at night, and so form a separate order. Birds which a hundred years ago were considered as belonging to one particular order have with increasing knowledge of anatomy and science been transferred to other orders ; finally, new orders have been formed to take birds which have been found to differ in some essential way from others which were once considered as of the same order.

The orders are in turn divided into families, and these families are far more intelligible to the ordinary student, since they mainly contain birds of the same kind or genus; but a glance at the List of Contents of Part II will show that in many cases more than one *kind* belong to the same family. Take the very first family, the *Corvidæ*, and we find the first four bearing the generic name *Corvus* (showing they are true crows), while the next two have the generic name *Pica* and *Cyanopica*, showing they are magpies; but even the beginner can see that the magpies with their harsh voices, strong bills and thieving ways are very crow-like birds, and so may well belong to the same family.

I have said that many generic names follow the family name (which is the natural process), but we must remember that many of these names have a synonym which upsets the rule. In choosing my names I have as far as possible followed the family name for the sake of simplicity, as, for example, if you turn up the thrushes (*Turdinae*) in the List of Contents, you will find the first seven of these all bearing the generic name *Turdus;* but I should have been equally or possibly more correct if I had substituted *Planesticus* in each case; and it is under that generic name you will find them in the Bulletin of Chinese Birds.

It must finally be confessed that the scientific naming of birds is full of pitfalls for the beginner as well as for the experienced ornithologist, but the fact remains that common names are even worse, for with those alone any attempt at following records and literature on international lines would be impossible. We can only hope that some day another Linnæus will arise sufficiently powerful to bring the whole world into line, so that his work will endure for at least one generation; in the meantime, we must be content to pick out the simplest names we can find and let these suffice for identification.

Classification in Brief

To summarize the naming of a bird, we find it is classified according to :—

(1) Order, (2) Family (and possibly sub-family), (3) Genus, (4) Species, (5) Sub-species ; but of these only (3), (4) and (5) constitute its scientific name under the trinomial system, or (3) and (4) only under the binomial.

I fear that many readers will not be convinced that I have made out any case for the use of scientific names, and I would be inclined to agree if we only had well-defined and well-known birds to deal with, such as the golden eagle, the common hawfinch or the sparrow ; but let any of my readers try to discuss a bird which he calls a blue pigeon, a grey tit or a grey wagtail with any ornithologist in any part of the world, and let him see how far he will get until he is able to refer to it by some accepted (or even discarded) scientific name. Then, and then only, will the light of understanding come into the ornithologist's eye and the wells of his knowledge pour forth.

Chapter V

THE MIGRATION OF BIRDS

In attempting a chapter on Migration I am afraid I am laying a rod in pickle for myself, for the average reader will probably be entirely uninterested, or, being interested, will accuse me of being too indefinite in my remarks. But if an ornithologist (or, worse still, an ornithophænologist, for it is by that terrifying name that the science of migration is sometimes known) should read this book, I shall be torn to pieces for daring to theorise on a subject outside the range of an amateur student of birds. There is, in fact, no doubt that bird migration is one of the favourite battlefields of naturalists the world over.

Most modern theories of migration are based on observations in Europe and America, since those are the greatest centres of ornithological endeavour, and perhaps the most complete records of all were taken by a German naturalist, Gätke, who worked for fifty years in the Island of Heligoland, this island being by its situation peculiarly suited for such observations. Gätke evolved theories from everything that he observed, and was doubtless convinced that whatever he concluded was correct; but since his day every writer on the same subject seems determined to prove that in most cases Gätke was wrong, that he mistook the exception for the rule and the shadow for the substance, and so the great argument goes on until this present day.

Under such circumstances it is somewhat rash to attempt to explain bird migrations in one short chapter, and

the ensuing remarks are offered in the most humble spirit, merely hoping to whet the appetite of the reader for more information and perhaps to encourage him to do a little observation himself so that one day we may be able to collect some authentic facts concerning the migration of birds through China.

Before commencing any historic account or any attempt at explanations it may interest readers if I confess to them my early impressions of bird migration, for similar impressions may at some time have existed in their own minds.

When I was a boy, some thirty or more years ago, when popular literature on the subject of birds was not so profuse as it is to-day, I had perforce to form my own theories on such subjects as migration (for I was even then intensely interested in birds). Either from my own ideas or from information gathered from my elders, I gained the impression that at certain times of the year all the birds of any particular species gathered together in one place, and at a given signal hurled themselves into the air ; once in the upper air they took a direct northerly or southerly course and proceeded at terrific speed until they reached their summer or winter quarters (as the case might be). These flights were performed over land and sea without food or rest, and it was only a simple question of arithmetic to find out, let us say, how long it would take the swallow which had built under our roof to reach Central Africa (which I was firmly convinced was his winter home). This theory was really very incorrect, but it certainly gave me a deep respect for my friend the swallow ; and perhaps, had I been better taught, I should not have continued to take such an intense interest in the swallow and all other birds as I have done. Had I known that the swallow migrates by easy stages, eating as he flies, I doubt if I should to-day have been taking the trouble to write these lines about him !

Thus do the romantic theories of youth turn into something more prosaic when the cold light of reason is turned

upon them; but, even so, we may say that the subject of bird migration can offer us something which hardly any other branch of science can give, for not even the most modern scientist can claim to tell us all about it, or anything which is near being all about it. The actual facts of migration are gradually being unravelled from much contradictory evidence, but the great majority of them still have to be guessed at. Let us begin by looking briefly at the history of what has been known and guessed at in times past, and then see if we can form any conclusions for ourselves.

Medieval Notions of Migration

The phenomenon of bird migration has been to some extent realized by man from his earliest days, as shown by records either written or merely handed down in the form of fable or custom. Indian tribes of unknown origin have named seasons from the coming and going of the birds, but the earliest known written records are contained in the Bible, and I need only quote Job xxxix 26, which says "Doth the hawk fly by thy wisdom and stretch her wings toward the south?" Here you will note not only the earliest written record concerning migration, but the most marked suggestion that migration routes are chiefly from north to south. Other Biblical references to migration are dealt with in this book under the heading of "Quails," and it is unnecessary to stress further the point that men have noticed, discussed and recorded the migration of birds from the earliest days.

Later writers and scientists evolved a number of theories which need not be gone into in detail, but which I would like to mention and comment upon to assist the reader in recognizing how little was known centuries ago, and how little is actually known even to-day, about bird migration.

The first interesting theory was that in view of the obvious fact that such large and powerful birds as storks

and cranes *must* be capable of long and sustained flight, it followed that each of such birds carried on its back a living freight of smaller birds when in course of migration. Here is a comforting theory to account for the otherwise apparently impossible movements of small and weakly birds which were seen in one country at one time, which then disappeared and were subsequently seen in another country to which they were apparently incapable of flying. Absurd though this theory may seem to some people, I must now confess that while in London last year (1928) I was assured by a naturalist of some standing that he had received only recently definite verbal evidence from modern observation in Northern Africa that this process of migration was an actual and visible fact. I must therefore leave it to the reader to judge for himself. Personally, I believe it just as I believe in the famous Indian rope trick, which nobody has ever seen, but which so many people (known to other people) are said to have seen.

Another theory (A.D. 1703) which was put forward to account for the disappearance and re-appearance of swallows was that they flew to the moon at the end of each summer. The author admitted that the journey might take them sixty days, but this calculation even helped him in this theory, for if the birds left this globe at the full moon, then in sixty days the moon would again be full and ready to receive them.

Swallows have of course always struck the imaginative chord in man, being the harbingers of spring or summer, and it is not surprising to find that many theories of migration have been built around them. The next theory was that swallows, and, of course, other migratory birds, spent the winter hibernating at the bottom of streams, ponds, etc. This idea was partly suggested by the habit of swallows of congregating in reeds, etc., near water just prior to migration, and it was probably given practical form by some ignorant fisherman pulling a half-drowned swallow out of the water and reporting the fact to an equally ignorant

(but enthusiastic) ornithologist, who at once formulated the idea that the bird was comatose in course of hibernation. I believe this theory resulted in a number of swallows being shut up in a barn and there provided with tubs filled with mud and water in which to "hibernate," with the sole result that they died of starvation—martyrs to science.

Following these ancient theories, which are inserted here as a sort of comfort both for the reader and the writer in their mutual ignorance, I will now try to explain some of the more modern ideas on this subject.

Natural Instinct of Migration

If we are asked when the migration of birds first commenced, the question is as difficult to answer as to say when the first man walked upright, and the difficulties increase with the length of time that the argument is taken back. Some think that birds of northern origin, once driven by climatic changes southward, now go homing northward to breed each year; others that birds of southern origin were driven north and now return to their southern home each year. It will be far better for us, I think, to leave the original causes and look at the present effects.

To me, the migration of birds seems a perfectly natural movement, with mystery attaching only to the method by which it is accomplished. All living animals migrate to a certain extent. Human beings go from north to south in search of warmth in winter; miners are sent to Canada for work in summer and return to England when harvesting is finished; millions migrate from one part of China to another in times of famine; countrymen, unable to make a living on the land, migrate to towns, and townsmen, suffering from house-shortage and high rents, migrate to smaller towns or less-populated countries.

All these simple facts, which appeal to the human mind, may be applied as reasons for the migration of birds; but the bird, by reason of its wonderful gift of flight (and probably by means of some other "sense," either given at

its creation or developed in course of time), is able to obviate these difficulties of hunger, house-shortage, cold and discomfort by moving to a suitable place at the proper time of year, without waiting until it is driven by necessity. Hence, with birds the habit of migration becomes regular and not spasmodic, as in the case of man and other slow-moving animals. For want of a better name we call this "instinct," and it seems a pity that man does not count such an "instinct" among his many gifts.

That there is some mystery attached to migration cannot be denied, for when we come to the migratory "instinct" in fishes the problem becomes beyond human understanding. There is not room to deal with these matters here, but anyone who cares to read the life history of the salmon, and, perhaps, even more bewildering still, that of the eel, must admit that there are some peculiar "instincts" or "extra senses" in certain of these creatures which the human mind cannot grasp.

But let us try to focus our attention on the birds, and see where we can understand their movements and where the mystery creeps in.

We must remember that migratory movements differ considerably in their character. Some birds cover immense distances and concentrate on the great breeding grounds of the north; other birds, moving northward, merely spread themselves over the temperate zones suitable to their needs. Let us take the "long-distance" birds and see what happens.

Nesting Ground Solitudes

The solitary expanses of the north, eastward from Northern Europe across Asia, and east again across the north of the American continent, appear to provide birds with an ideal nesting ground. With the coming of the sun the untrodden country teems with insect life, and so provides ample food. With the approach of winter, food becomes

scarce and the cold intense, so the south is sought for food and warmth.

If you look at a map of the great continents of Europe and Asia, you will find an immense tract of country beginning with the Arctic Circle in the east, passing along the coast through the Taimyr Peninsula (note particularly the Tundras below it), and thence below the Island of Novaia Zemlia to Lapland. This represents the borders of the vast country in which hundreds (or thousands) of millions of birds from the Eurasian and African continents breed yearly ; many others go through Europe and farther north to Greenland, Spitzbergen, etc., while there are, of course, many other millions of birds which prefer to remain and breed in the more temperate climates of Central Europe and Asia.

The main tendency of these movements is obviously north to south, and one question that men have asked themselves for centuries is: "Do migrating birds *always* travel north to south, diverting only when driven off their course, or are certain migration routes taken deliberately in an east to west direction ?" To get an intelligent answer to this and several other questions, it may help if we tabulate a few reasonable "axioms" based on what has already been observed of birds in course of migration.

Distances and Routes

(i) Every bird has some limit to its powers of endurance, and, though the exact limit is not known, we may say that small birds cannot travel more than a few hundred miles without rest ; others can naturally do more, and the longest known flight without rest is that of the Pacific golden plover, which travels 2,400 miles over an islandless ocean from Alaska to Hawaii. So far as land birds are concerned, then, we may say that direct east and west migration, which would take them over the largest oceans, is never performed (unless by accident).

(ii) The route will probably follow certain prevailing winds, since these will hasten the passage. The old theory that birds cannot fly with the wind, because their feathers would be ruffled and their flight would be upset, has long since been disproved. Flight by aeroplane has taught us that if a bird flies at 40 miles per hour, and has a following wind of 60 miles per hour, it is capable of flying 100 miles per hour. Birds, like aeroplanes, probably prefer to take off and mount and land "into the eye of the wind," and this has possibly deceived many observers before aviation taught us some of the secrets of flight.

(iii) Coast-lines, being good aids to navigation, as well as places where food and rest may be obtained, will be followed as far as possible. If the sea must be crossed, then islands or chains of islands will be followed for the same reasons.

(iv) If the route is overland, it will probably follow watercourses, lakes, etc., for where there is water there are insects and food of all sorts for birds. Water is also a good navigation mark from the air.

(v) The height of the route (within reasonable limits of air-density, etc.) will be governed by the prevailing and favourable wind, and this holds good whether a bird prefers to fly with or across a wind. If any particular air-current becomes unfavourable the birds can go either higher or lower, and, as a last resort, fly close to the earth or sea for shelter or guidance (wave-direction may be a form of guidance).

(vi) Small and weakly birds will usually not have the strength to mount and fly so high as larger and stronger birds, but this rule is subject to much variation and many exceptions, being, in fact, sometimes reversed.

(vii) Small birds will prefer to migrate by night because it will give them protection from predatory birds. Many other (day-feeding) birds will prefer to travel by night because they can both rest and feed when landed for the day.

That is as far as I care to go for the present with my "axioms," and it only remains to see how far these axioms are borne out by the facts before us as we may meet them. Let us next try to apply them to a few questions, beginning with the one given above.

A Migration Questionnaire

(*a*) *Do birds travel deliberately east to west as well as north to south?* Yes. Many birds which breed in the Tundras of North Siberia travel west along the coast to Norway, and sometimes cross to the British Isles before turning due south: the journey across the sea to England takes them across Heligoland, where so many observations have been made.

Our birds in China similarly travel east and west, as it suits them before turning due north or south. Many go east or west to reach the coast and then travel up or down on favourable winds.

(*b*) *Do birds travel on specified "fly-lines" (like railway or steamboat traffic), or do they progress over a broad area?* The answer is, they do both as it suits them. "Fly-lines" may be said to exist where there is a favourable coast-line, chain of islands, river or other convenient air-channel for them to follow. Other birds migrate on a broad front, limited only by winds and the natural advantages to be found on the way across country in different seasons. The northward journey is, of course, often on a route entirely different from the southward one, the reason being that the winds and the natural resources of the country differ at the two seasons concerned. Prevailing winds and the positions of islands are the two most important factors in creating "fly-lines," and the peculiar position, for example,

of Heligoland, where so many theories have been evolved, is probably responsible for the implicit belief placed on the "fly-line" theory by so many observers.

(*c*) *At what height do birds migrate?* If you care for statistics prepared by the experts, here are a few (out of many):

		Feet
Most small birds	(below)	3,000
Geese		9,000
Sandpipers, etc.	10,000 to	12,000
Storks, cranes, etc.	(up to)	20,000
Highest recorded altitude (geese passing over Mount Everest)		29,000

This gives us a fine range to choose from; that is to say, within a few feet of the ground up to the highest ever seen! And I think that is the answer as far as we know it to-day. We see a good deal, but what we see may be the exception and not the rule. Because birds crash into a lighthouse window it does not record the height of their usual flight, but merely records the fact that they have been misled by a revolving light in some manner unknown to us. I believe that within the limits of breathable air birds migrate at any height which suits them according to the air currents, and that, naturally, the larger and stronger birds will be capable of climbing higher than the smaller birds if it suits them to do so.

(*d*) *At what speed do birds migrate?* The answer is that this depends on the flying-speed of the various kinds of bird, and on the strength of the wind, and whether it is with or against them. Remember that birds are not *infallible* weather prophets, though they may be good ones, and thousands at a time are drowned at sea or seen struggling to land half-dead in the teeth of a gale (thus providing further "statistics" for theoretical observers, who promptly write a thesis proving that certain birds prefer to fly at a low altitude and against the wind). Taking flight in an

ordinary calm, the following seem fair estimates of unhurried speed :—

	Miles per hour
Small birds (buntings, etc.) ...	20 - 35
Crows	30 - 45
Ducks	45 - 60
Geese	40 - 60
Falcons	40 - 50
Swifts, etc.	70 -120

In considering the above we must remember that birds flying with the wind are capable of increasing their speed by the speed of the wind ; also that in the case of an overseas migration they will probably fly at top speed (having reference to distance), and under such circumstances a *swift,* for example, is capable of perhaps 200 miles per hour. But unless the flight is over an islandless sea, speed capacity does not coincide with progress per day or hour, as we shall presently see.

(*e*) *At what rate do birds progress when in course of migration ?* When travelling overseas the bird naturally flies at a maximum speed the whole way (subject to resting and feeding on any available island). When travelling overland the rate of progress is variable according to the season and the inclination of the birds. The speed must also depend largely on the distance the bird has to cover between the summer and winter home. The greatest distance is travelled by the arctic tern, which flies almost from Pole to Pole, thus travelling about 11,000 miles per journey and spending almost the whole year in perpetual daylight. The average time for each trip is about ten weeks.

Land birds have been timed over a 4,000-mile journey, which took them a month, thus showing a rate of progress of about 130 miles per day, which is comparatively fast for an overland journey. Smaller birds travelling overland may do anything from 30 to 80 miles per day (or night), thus showing that a very large proportion of their time is spent in resting and feeding. All such figures are of course

based on averages, and it is highly probable that the smaller birds travel perhaps a few hundred miles in one flight, and then rest for several days, and it is for this reason that we see so much of the migrating birds, which stay in the fertile Yangtze Valley to rest and feed on their way north.

(*f*) *Do migratory birds always return to the place of their birth to breed?* We have not much in our "axioms" to help us here, for this is one of the problems that involves the theory of "instinct." It is sufficient to say that in the vast majority of cases birds do return to the place where they first saw the light, but the modern experiments of "banding" birds, both nestlings and adults, have proved, in the case of ducks, that young birds will flock with others of their kind from different places and will so adopt a breeding place which is far from that of their own origin. The fact that this has so far been discovered to apply only to ducks is not conclusive, for ducks, being a favourite target for the sportsman's gun, are more likely than other birds to be traced by means of the "band" when shot; and what is true of them may be equally true of other birds.

(*g*) *How do migrating birds find their way on their long flights?* Here is a question which must give us pause, but if we are to arrive at any conclusion let us examine each possible answer as it occurs to us:—

(i) The correct route may be shown to each succeeding generation by the parents. This may be so; but the trouble is that in many cases the young leave the nesting grounds first and the parents follow by themselves later, *or vice versa.*

(ii) Old birds which have performed the journey many times may act as guides both for adults and young birds which appear to be travelling alone. As regards the birds travelling north to the breeding grounds near the Arctic Circle, we hear, for example, in the case of geese, that the first sign of the incoming migrants, eagerly awaited by the natives

as the first sign of coming light and warmth, is a solitary goose which flies over the land and then turns back to join the flock which will appear later. This sounds very much like a "guide" or "scout," but unfortunately there is no such evidence, nor any sign of old birds, in the case of the young birds travelling southward alone; this may, of course, be due to error in observation, but the bulk of evidence to date is very negative. Young birds may, of course, follow the course taken by other adult birds going south at the same time, but the evidence on this point is either contradictory or negative.

(iii) Failing either familiarity by experience or the leadership of guides, we have to fall back upon those familiar and yet vague words "orientation" and "instinct," and here we are in such deep water that I fear I must try to deal with those expressions in a separate chapter. We must, however, here note that there is no conclusive evidence to prove even that birds navigate by sight alone, although the habit of "hugging" coast-lines would suggest this, and although we know that birds have particularly keen and long sight to aid them. Birds will, for example, come swinging up to a small island through a dense fog, and fishermen have been known to use them as guides under such conditions. Again, we know that sea-birds will travel hundreds if not thousands of miles over the open sea in a direct line for a familiar breeding ground on a small island with no visible mark to guide them. Finally we have the case of penguins, which travel hundreds of miles on the surface of the water (being unable to fly) and find their way unerringly to their special breeding grounds.

Here, then, we are faced with the greatest mystery of all: what is the extra sense, peculiar gift, or instinct by virtue of which birds navigate the air-routes, sometimes almost from Pole to Pole?

Familiar Migrants to Shanghai

Before closing this chapter I will give a few of the movements of familiar birds which we see either as visitors or "birds of passage." Many more examples could be given, but the reader may prefer to work these out for himself.

Buntings breed in Eastern Siberia, Manchuria, etc., migrate up and down the coast of China, and are often seen flying in large numbers at no great height. They winter in South China. A large number stop to rest and feed in our neighbourhood on both the northward and southward journeys.

The *Common Cuckoo* breeds in North Asia eastwards to Japan and south to the Himalayas; in winter the birds migrate to India and Ceylon. Here is movement on a very "broad front" and showing direction both east to west as well as north to south. We only see these birds in the very early summer, and I believe they pass on much further north to their actual breeding grounds, our birds being probably only stragglers.

The *Indian Cuckoo* winters in India and Ceylon, and goes north and east to breed in China and Japan, Korea, etc., and north to Siberia. Many birds stay with us in Kiangsu between May and September. The southward journey in winter may take the birds anywhere between Southern India and Borneo, or to islands even farther east.

The *Pond Heron* migrates between winter quarters in the Malay Peninsula, Burma, etc., and breeding quarters in China, north to Mongolia and Manchuria. Some

breed in our neighbourhood, and so remain as summer visitors.

Other *Herons*, such as the little egret, etc., have similar habits and travel from India, Ceylon and the Philippines as far as the north of Asia.

Orioles winter in India and travel north and east to breeding quarters in China, going as far north as Eastern Siberia. With us they are summer visitors, staying to breed.

The *Paradise Flycatcher* migrates between Sumatra and the Malay Peninsula north to Manchuria, stays to breed in any part of China, and hence is one of our summer visitors.

Snipe are, generally speaking, "birds-of-passage," so far as we are concerned, passing us in spring and autumn on their way to and from their breeding grounds. The greater spring snipe, for example, breeds in East Siberia, and travels south through China to the Philippines and Molucca Islands.

Wagtails are known here as winter visitors; they have a very wide range, breeding in Northern and Central Asia down to Mongolia, and wintering in South China and India.

Chapter VI

SOME REMARKS ON ORIENTATION, INSTINCT AND A POSSIBLE "EXTRA SENSE"

The Sense of Direction

Taking first the dictionary meaning of the word "orientation," we find it defined as "determination of the points of the compass, or the east point, in taking bearings," but it really means much more than this. Other dictionaries go so far as to admit a definition such as "the homing instinct, as in pigeons," but this is really going too far. The meaning, as we know it, is something between those extremes. The ordinary man calls it "sense of direction," and leaves it at that. Various animals have this sense to a marked degree, and some men have it more than others. Charles Dickens knew all about it when he described John Baptist Cavalletto, a little Italian sailor, sitting on the floor of a filthy prison in Marseilles and mapping out with his thumb the route by which he was brought and a complete plan of his surroundings, although he had been brought to the gaol under such circumstances that he could not possibly see where he was going. There, in the opening chapter of "Little Dorrit," is the full sense of orientation in a nutshell.

To establish the fact that birds possess this peculiar sense in a marked degree is important if we are to understand their movements, but at the same time we must learn to distinguish it from a blind "instinct" or from any peculiar faculty, at present unknown to human beings, which may also form a part of the mysterious power by which birds are guided in the course of migration. Just

as we are all familiar with many stories of how dogs, cats and horses will find their way home over strange country (possibly in the dark), so we all know something of the homing pigeon which can fly home from a strange country one thousand miles away; but for the purposes of our theory there is this weakness in the case of homing pigeons, that they are gradually trained over increasing distances, beginning with, say, 20 miles, gradually bringing this up to 100 miles, and then increasing by greater distances until they can "home" from a point 1,000 miles away. But in such a case, seeing that the bird can hardly see over a distance of 100 miles, there must be a very great leavening of "orientation," added to good memory and good sight, when the bird's distance is increased by 100 miles at a time. Nor is our familar homing pigeon alone in this field of endeavour, for the frigate-bird of the Pacific is regularly trained as a carrier of messages and is capable of long flights overseas to the home where it is trained and fed.

Perhaps the most interesting and convincing example of this sense in birds was provided by certain experiments carried out with a number of terns.

The birds chosen were of a species which are known to migrate almost due north and south. Twenty-four birds were taken from an island where they breed and transported below decks (where they could not see) in a ship going almost due west. This question of direction is important, since, if they returned, it could not be claimed that they were following a blind instinct to travel north or south as usual in their migrations. The birds were released at distances varying from 400 to 800 miles from their starting-point, and it was actually recorded that 13 (including three from the 800-mile mark) returned to their island home. Immediately on being released from the ship they were noted to fly off, without any hesitation, due east, in the direction from which they had come, and thus, over the open seas, with no landmarks to guide them, the majority returned

unerringly home. The fact that some failed merely shows that their endurance or their sense of orientation was not sufficient, and this is a further argument in favour of the theory that this "orientation" is a properly developed sense, and not a mere instinct common to all.

Instinct is undoubtedly possessed by birds, but there is nothing wonderful in this, since every animal has some unguided natural impulse to which we apply that term. The newly-born mammal instinctively turns to feed from the parent that bears it; a bird of a species which fishes for a living will at once begin to fish when brought into the vicinity of water, whereas any other kind of bird would look blankly at the water without considering it as a source of food. Scores of examples could be mentioned to show that instinct in the nature of a natural impulse is by no means the same as an especially developed sense, such as orientation, which is not peculiar to any one species, but common to many birds and animals in a greater or lesser degree.

Theory of an Extra Sense

Once we have admitted the existence of especially developed senses which are not particularly known or developed by man, we enter into a very wide field of speculation, and I will now turn to a theory of an "*extra sense*" in birds which I have often pondered over, but have only seen mentioned by one writer on birds, Mr. T. A. Coward, in an article published in 1924 in the *Contemporary Review*. (*See* also his book "The Birds of the British Isles.")

The possibility that birds (and particularly the migratory species) may have an "*extra sense*" *which enables them to communicate with one another over long distances* has often occurred to me, and is often suggested to my mind when watching the simplest actions of some of them. There is nothing particularly new in this idea, for the sudden concerted movements of flocks of birds has been suggested long ago by learned professors in support of the theory of

telepathy, and it is perhaps only for lack of really conclusive evidence of this sort that the theory has never been proved.

In the summer time at Shanghai small "family parties" of herons (little egrets) may be seen passing overhead, particularly in the early mornings when on their way from nesting sites to feeding-grounds, and in the evening on the return journey. If you watch these parties carefully you may almost get to know them, and you will find they always stick together, some in threes or fours and some in parties of five or more. Watching a party of five I have noticed (in the early morning) one suddenly detach itself and swing round in the opposite direction back to the nesting site some miles away. Why should it do this ? It is impossible that the bird could have forgotten something and have flown back to fetch it ; its only apparent need for the moment is food, which it is on its way to get. Why, then, turn back ? Is it possible that a "message" has come through that its presence is required at the nest ? Again, you may watch a family party of cattle egrets feeding in the fields. Gracefully and deliberately out of the blue comes another and alights beside them. None of them even turns to watch its arrival, and it has every appearance of being expected. How did it know where to find its kin ? Is it possible that the birds, divided by several miles, are still in communication as though by "wireless" (man's latest wonder which has been waiting for his recognition ever since the world began) ?

These are merely stray observations which may be made from day to day by any observer of birds. There are more suggestive examples to be found in the case of the rapacious birds during the breeding season, for by their peculiar methods and habits they single themselves out for particular observation. It is the business of gamekeepers to watch and to kill such birds, and their evidence, as practical experts, may be taken as authentic in almost every case. With such evidence before us this

is what we learn. It is well established that birds of prey, such as falcons, harriers and hawks, and even carrion crows, have a regular "territory" which they jealously guard for themselves during the breeding season. If any other of their kind should dare to enter and attempt to set up a home, he would simply have to fight for it and conquer or depart. This is really due to the fact that a certain area can only support one family with food; and birds, knowing this, jealously guard their rights. One result of this system is that there are always a number of birds of both sexes awaiting, unmated, the opportunity to take up any vacancy in the home-life of their kind. In other words, there are always a large number of bachelor and maiden adult birds of almost every species awaiting the necessary vacancies in breeding quarters, so that the house-shortage problem may be said to be well known to birds. Now let us see what happens in the case of the rapacious birds which are so carefully watched. The gamekeeper to protect his game will shoot either bird on sight, and the next day out of the blue comes either a male or female of the same species and quietly assumes the required duties either of incubation or hunting for food according to sex. This process has been known to go on over three or more successive killings, and any gamekeeper will tell you that to rid himself of such enemies he must kill both birds almost simultaneously. How is this done, and how does the surviving bird make known its requirements? Is it not possible or even probable that the birds have some method, at present unknown, of broadcasting their needs to their kind? The action of a small "crystal set" is almost unbelievable to those who use it, and yet we know what can be done with it. Is it so unbelievable that there should be some almost similar vibrations set up in the brain and body of a bird?

If we once admit the possibility or probability of such a theory, many things might be explained. The simple action of the little egrets and the cattle egrets which I

mentioned above, the apparently strange actions of large flocks of knots and other migratory birds which are often noted to congregate on beaches before the migration has been fully completed—in such cases the puzzle is why such fully adult birds should fail (and not even make an effort) to reach the breeding-grounds. Is it possible that a message has come through that there is a food shortage in the breeding-grounds and there are no more vacancies ?

When parent birds leave their young to follow when they have gained full plumage and sufficient strength, is it even possible that they may guide them by this unknown form of telepathy, or vibrations through the ether, or by whatever the suggested form of communication may be ?

When the homing pigeon, frigate-bird or tern sets off on a long journey over unknown country or seas, can he be guided, not only by his highly developed sense of orientation, but also by some form of communication with his kind ? Have experiments ever been made to prove whether the larger number of birds would return if the homing point were occupied by a number of their kind, or if fewer would return if there were no birds in the neighbourhood of the homing point ? I have never heard of such experiments, but think we might learn a lot if they were carried out.

Even given the sense of orientation and the suggested " extra sense," it must be remembered that many birds in course of migration lose their way and land in strange places, or perish from exhaustion or drowning at sea, just as ships perish even with the aid of the compass, wireless and human guidance. But the vast majority of birds, whether they be old birds who know the way, or young birds " sensing " their way across land and sea, reach their destinations safely, and who is to deny the possibility of special senses or gifts unknown to the human mind ?

End of Part I.

PART II

ORDER **PASSERES**

This is the greatest of all the orders (taking its name from the humble sparrow) and contains something like half the known birds of the world including practically all the song-birds. There are always four toes, three in front and one behind, especially constructed for perching and walking, as opposed to gripping, swimming or wading. As in the case of nearly all the orders an exact scientific definition can only be based on anatomical detail, which will not be attempted in this book.

FAMILY—**CORVIDÆ**—*THE CROWS*

These are the largest of the *Passeres*, but the largest of all, the raven, is not represented here.

The chief characteristic is the big powerful bill about the same length as the head.

The family includes the crows, the rook and the magpies described below, all of them being bold, strong birds with harsh voices.

ORDER : PASSERES
FAMILY : *CORVIDÆ*
C. B. No. : 890B

BIG-BILLED CROW

OR

JUNGLE CROW

Corvus coronoides colonorum

or

Corvus macrorhynchus

(See Plate No. I)

Field identification.—A large black bird, slightly bigger than a rook, with a heavy arched beak fully feathered at the base.

Description.—Length about 20 inches, with a bill $2\frac{1}{4}$ inches long, heavy and arched and not showing any bare patch at the base as in the case of the rook. The general colour is glossy black but when seen in a strong light there is a distinct sheen of both purple and green in different parts. The back is inclined to be purple and the head and neck green while the long wing-quills are glossed with green on the outer surface ; even when a specimen is handled it is very difficult to state accurately where the purple and green begin and end.

Nesting habits, etc.—The nest is usually built high up in a tree, though it might occasionally be placed in an odd situation such as a chimney-stack : it is roughly made of twigs with a slight lining of any softer material which may be handy. Building usually takes place in March or April, and there are five eggs, light-blue with blotches and streaks of green and grey.

"Shanghai Birds"

Plate No. I

Rook

Collared Crow

Bigbilled (or Jungle) Crow

ORDER : PASSERES
FAMILY : *CORVIDÆ*
C. B. No. : 892

COLLARED CROW

Corvus torquatus

(See Plate No. I)

Field identification.—A large black bird, with a pure white collar running round the neck and down on to the breast : a typical crow and a big heavy bird.

Description.—Length about 19 inches. The plumage is black all over except for a broad white collar which extends over the whole breast. The black feathers have a distinctly purple sheen in a strong light. These are solitary birds and may often be seen round Shanghai either singly or in pairs.

Nesting habits, etc.—Similar to those of the other lonely crows, the nest being made of sticks with a softer lining : the bird is an early breeder (February-April) and three or four eggs are laid, light blue-green marked with dark green and grey spots, etc., some of these having a red tinge. This bird will build in the vicinity of houses and is said sometimes to use an old magpie's nest in which to rear its family.

ORDER : PASSERES
FAMILY : *CORVIDÆ*
C. B. No. : 893

ROOK (CHINESE OR EASTERN)

Corvus frugilegus pastinator

(See Plate No. I)

Field identification.—A large black bird with a pointed beak, the base of which is bare, leaving a patch of white scurfy skin : generally seen in large numbers.

Description.—Length about 19 inches. This is the gregarious "crow" of common parlance, he is all black with purplish lights, but the mark which distinguishes him from other crows is the whitish patch of scurfy skin at the base of the black bill. These birds may be seen anywhere in and around Shanghai, they feed in large numbers in the fields and congregate in the evenings in trees and on housetops in the Settlement. Apart from the general annoyance caused by their noisy habits when in large numbers, they have a bad habit of tearing off young twigs from the trees for nest building, often destroying far more than they use, and hence, are not loved by our gardeners. Although they steal a good deal of the farmer's seeds they also destroy a large number of harmful grubs and insects, so the Chinese farmer leaves them alone.

Nesting habits, etc.—True to their gregarious habits, the rooks build their nests in colonies, in groups of trees, and often several in the same tree. The nest is a round pile of sticks and similar to that of all crows ; they will build very close to houses and often in the most unexpected places. I remember a nest built at the top of the P. & O. flagstaff on the Shanghai Bund, but I cannot recollect if a family was ever reared there—I fancy the nest interfered with the wind-vane and was removed. The eggs are four or five in number, greenish blue and marked or streaked, sometimes faintly and sometimes very thickly, with different shades of brown. (The colour of the eggs is subject to considerable variation.)

ORDER : PASSERES
FAMILY : *CORVIDAE*
C. B. No. : 895

MAGPIE (CHINESE)

OR

COMMON MAGPIE

Pica pica sericea

(See Plate No. II)

Field identification.—A black and white bird with a wedge-shaped tail (*see* illustration). In flight the tail is spread laterally and when the bird is on the ground, or perching, the tail is continually raised and lowered.

Description.—Length about 18 inches. Of the two common names used in China that of " common magpie " is the most usual, but the name " Chinese magpie " distinguishes it from the English bird from which it differs by having blue on the wings and less white in its plumage. The magpie is such a distinctive bird that it should hardly require any detailed description. It is chiefly black but is pied with white patches on the shoulders, abdomen and lower back. There is a good deal of white on the main wing feathers and this varies with the age of the bird. Other wing feathers are metallic blue and green when seen at close quarters but the general effect from a distance is that of black and white. The tail is graduated, being wider towards the tip and the feathers show a fine sheen of purple and green.

This is one of our commonest birds and may be seen feeding in any field, farmyard or garden, it is bold and mischievous in its habits ; it is much persecuted in Europe owing to its raids on hen-roosts and other thieving habits but the Chinese seem to like it and consider it an omen of good luck ; they have many names for it such as " Bird of Joy," " Guest Bird," etc., and it is considered a sign of good fortune to have it call on your approach. The call is a harsh cry something like " Ee-Zack," or " Zack."

Nesting habits, etc.—Magpies build large nests of sticks lined with roots, etc., well up in a high tree. They are said to mate for life and will return every year to the same nest, often adding a storey or merely making necessary repairs. The top of the nest is covered and the entrance is usually at the side : the eggs are pale green spotted with brown, and anything up to six are laid. These birds are our earliest breeders and you may see them at work on their nests in the bare trees in January, while the young are out feeding with the parents before the summer has really commenced.

"Shanghai Birds"

Plate No. II

Common Magpie

Azure-winged Magpie

ORDER : PASSERES
FAMILY : *CORVIDÆ*
C. B. No. : 896A

AZURE-WINGED MAGPIE

Cyanopica cyana swinhoei

(See Plate No. II)

Field identification.—A light grey-blue bird with a black cap, similar in shape to a common magpie, but about three inches shorter.

Description.—This bird is about 15 inches long and in spite of the great difference in colour may easily be recognized from the great similarity in shape to its less showy cousin the common magpie. The crown and nape of the neck are black, the rest of the plumage giving the general appearance of being sky-blue : when examined at close quarters the back and underparts are grey while the wings and tail are azure-blue with a white border on the outside tail quills ; the bill and legs are black. The other local names for the bird are the " blue magpie " or " blue jay," but the name given above is more correct since the wings, and tail, supply the blue colouring. This bird is one of our residents and is very common in the Lower Yangtze valley.

Nesting habits, etc.—These birds are nearly always seen in flocks and they build their nests in colonies in high trees. The nest is somewhat elaborate since there is an outer nest made of sticks and an inner nest of moss based on mud and lined with hair, wool or fibres.

The eggs have a greenish-grey or olive-brown background marked with round spots, specks and lines of brown and purplish grey ; as this description suggests, the colouring of the eggs varies considerably.

FAMILY—**PARIDÆ**—*THE TITMICE OR TITS*

These are little birds whose anatomical definition is more complicated than usual. From the ordinary observer's point of view they may be described as active little birds of varied and copious plumage with a special gift of hanging upside-down or sideways from any precarious perch: the bill is short, conical and sharp, especially constructed for picking up insects from the bark of trees, but a titmouse does not hesitate to eat grain or fruit if it is handy. There are many titmice in China but only three which are common in our neighbourhood.

ORDER : PASSERES
FAMILY : *PARIDÆ*
C. B. No. : 861A

LESSER GREY TIT

OR

NORTH CHINA TIT

(Local name-Tom-tit

Parus major artatus

or

Parus minor

(See Plate No. III)

Field identification.—A little grey and black bird with a white face. The most conspicuous marks are the black cap, black ring round throat and black "apron."

Description.—Length about 5 to 5½ inches. This is the commonest of the local titmice and we might well decide to call it the "Tom-tit" or "grey tit," without using the word "Lesser," since I know of no greater grey tit in China. I mention this point because the scientific naming seems to have been somewhat at sea, thus, it was called *Parus minor* in 1906, *Parus major* in 1909 and at a later date, apparently in desperation, was referred to as *Parus major minor*! It is, however most undoubtedly a grey tit with a black crown and neck; the sides of the face are white, leaving a black ring round the neck; the throat and upper breast are black forming a kind of apron which is continued in a black line down to the abdomen, the rest of the lower parts being white to grey. Below the black of the head and neck there is a yellowish-green patch on the mantle which is continued in blue-grey shades down to the lower back. The wings are chiefly black with white edges to the upper feathers, and the tail blue-grey with white feathers showing below.

These cheerful little birds are most prominent in the spring and early summer when their gay, if not very musical, song will be heard : this consists of a few shrill notes which may be written " Pitsy-Wee-Pitsy-Berry-Chew-Pitsy-Wee " with variations and repetitions of the same theme. When angry or excited the grey tit will give a repeated call sounding much like the noise made by the cicada or " scizzor-grinder."

Nesting habits, etc.—The nest is hidden in any convenient hole in tree or wall, the hole being lined with a pad of moss, feathers or other soft material. There are from five to seven white eggs spotted and speckled with red.

ORDER : PASSERES
FAMILY : *PARIDÆ*
C. B. No. : 873c

MARSH-TIT (EAST CHINA)

Parus palustris hellmayri

(See Plate No. III)

Field identification—A dull grey little bird with a black cap and nape.

Description.—Length about 4½ inches. The crown and back of the neck down to the upper part of the back is black ; rest of upper parts a dirty brown grey ; tail grey to brown. The throat and chin are black, the rest of the underparts shading from dirty white to dull grey ; wïngs grey-brown like the tail, the latter slightly darker.

These little birds are residents in Kiangsu Province but they are most obvious in Shanghai when gathered in winter flocks. They may then be seen clinging in every possible attitude to the roadside trees in search of insects.

Nesting habits, etc.—The usual tits' nest of soft material is placed in a hole, generally with a very small opening, and near the ground. Six or eight eggs are laid, white with light red spots and small dots.

Note.—The illustration seems to show this bird with more brown than grey in its plumage, whereas I always see it with more grey : perhaps this is a matter of light : it was apparently painted from a Northern specimen as our birds show much more black down the back of the head and nape.

ORDER : PASSERES
FAMILY : *PARIDÆ*
C. B. No. : 880A

SILVER-THROATED TIT (NORTH CHINA)

OR

LONG-TAILED TIT (CHINESE)

Aegithalos caudatus glaucogularis

or

Aegithaliscus glaucogularis glaucogularis

(See Plate No. III)

Field identification.—A black, grey and brown little bird with a long tail showing white at the sides and tip, (the grey spot on the throat is not always an easily noted mark of identification).

Description.—About $4\frac{3}{4}$ to 5 inches long, the females being slightly smaller than the males. The head is mostly black, but there are patches on the forehead and sides of the head, and a streak from centre of crown to nape, of a reddish vinous colour. The rest of the upper parts are grey, the wings grey-brown to black, and the tail dark brown showing white edges and a white patch at the tip. The underparts are vinous, not unlike the breast of the dove. The bird takes its name from a silver-grey patch on the throat, but when seen from certain angles this distinctive mark may appear just dull grey or almost black.

This little bird is easily distinguished from the other tits by its darker and more varied plumage and its long tail, which represents about half its total length.

Nesting habits, etc.—The nest may be found in willows, bamboos or any coniferous trees, the latter being especially favoured; it is oval in shape and constructed with moss, grass, etc., bound together with cobwebs ; there is a hole near the top to give entrance, and on the feathered lining there will be laid six or eight pinkish white eggs finely speckled with different shades of red.

Note.—The illustration shows this bird much lighter in colour than it appears to the eye : the black usually looks much more pronounced and the stripe through the crown more reddish-fawn.

"Shanghai Birds"

Plate No. III

1.—Lesser Grey Tit
2.—Marsh Tit
3.—Silver-throated (or Long-tailed) Tit
4.—Webb's Crow-Tit
5.—Wren

Family—**TROGLODYTIDÆ**—*THE WRENS*

These little birds have a more distinctive appearance than any general description can convey.

The bill is rather long and slightly curved downwards, the wings short and round, and the tail short and erect. There are only three or four different wrens in the whole of China and we only have one as a visitor in autumn and winter.

ORDER : PASSERES
FAMILY : *TROGLODYTIDÆ*
C. B. No. : 714

WREN (NORTH CHINA OR EASTERN)

Troglodytes troglodytes idius

or

Anorthura fumigata

(See Plate No. III)

Field identification.—A tiny dark brown bird with erect stumpy tail.

Description.—Length about 3½ inches. This is the only wren to be seen in Shanghai and then merely as a visitor in the late autumn and winter, when there is no attempt at song ; a sharp squeaking and chattering is all that you will hear as these tiny birds creep round the shrubs in search of food. The plumage is dark brown above and lighter below, the upper parts being barred with black and the lower with brown. There is the usual erect and stumpy tail, brown above and whitish below barred with brown. As the scientific name suggests, the wrens are cave-dwellers by nature and love dark places and holes to nest in, but they do not breed anywhere in our neighourhood, so that their nesting habits do not concern us here.

Family—**PARADOXORNITHIDÆ**—*THE CROW-TITS*

This rather terrifying name was apparently invented to describe a family which did not comply with the ordinary rules. The chief distinctive feature is a short bill, high, narrow and somewhat curved. In other respects they are much like the other tits, and we only have one common member of the family to deal with.

ORDER : PASSERES
FAMILY : *PARADOXORNITHIDÆ*
C. B. No. : 847

WEBB'S CROW-TIT

Suthora webbiana webbiana

(See Plate No. III)

Field identification.—A small brown bird with a short curved beak. The round curve of the head and nape might suggest a miniature parrot.

Description.—Length 4½ to 5 inches : the upper parts are a dull rufous brown turning to grey-brown in the summer ; there is a vinous tinge at the sides of the head. The throat and breast are pale vinous, the flanks brown and the abdomen pale buff ; wings and tail brown.

The distinctive beak is short, high and curved, brown at the base and yellow at the tip.

These little birds are usually seen in reed-beds and they travel, particularly in winter, in large flocks when their sharp chirping will often attract your attention. They are residents and always frequent the well-watered lowlands.

Nesting habits, etc.—The nest is a cup-shaped construction of grass and leaves, bound with cobwebs and lined with finer grasses, generally placed in reeds or small bamboos near the ground. There are five eggs, light blue or nearly white.

Family—**TIMALIIDÆ**

THE BABBLERS OR LAUGHING-THRUSHES

These are gregarious, noisy, birds with loose plumage and not to be confused with the true thrushes (Turdidæ) though they are much like them in size and shape. The name of babbler is obviously taken from the noisy habits of the birds and is much more descriptive than the alternative "laughing-thrush." Only one of our local babblers (the Hwamei) is a song-bird though many of the family are famous for their singing.

ORDER : PASSERES
FAMILY : *TIMALIIDÆ*
C. B. No. : 491

SPECTACLED LAUGHING-THRUSH

Dryonastes perspicillatus perspicillatus

(See Plate No. IV)

Field identification.—A fairly large brown bird, shaped more like a jay than a thrush, with brown tail shading to black ; note the black area round the eyes.

Description.—This large babbler is about 13½ inches long. The loose, untidy plumage is, speaking generally, rusty brown shading to grey on the throat and breast. There is a brownish-black area round the eyes from nostrils to ears which accounts for the local name of " spectacled laughing-thrush." The tail is brown shading to black at the end, and you will note that it is generally spread out in flight. It has a harsh noisy cry which calls for some imagination if it is to be described as a laugh. These birds are residents and have a habit of forming small but very noisy flocks in the winter.

Nesting habits, etc.—The nest is built usually low down in a tree or bush in a close thicket, it is made of twigs, roots and grass, lined with finer grasses, etc. There are usually four eggs, greenish-white in colour and very glossy.

Plate No. IV

Brown Laughing Thrush (Hwamei)
Spectacled Laughing Thrush

ORDER : PASSERES
FAMILY : *TIMALIIDÆ*
C. B. No. : 515

BROWN LAUGHING-THRUSH

OR

HWAMEI

Trochalopterum canorum canorum

(See Plate No. IV)

Field identification.—A brown bird with white eye-brow and ring round the eyes ; tail darker and narrowly barred black ; dark shaft lines from throat to upper breast.

Description.—About 9½ inches long, this bird is in size and general appearance more like a real thrush than is any other babbler. The upper parts are a bright brown, with dark shaft lines from crown to upper back. The main feathers of the brown tail are narrowly barred with darker brown towards the tip. There is a distinct white circle round the eyes, this being extended as a white line to the sides of the neck. The underparts are mostly a bright ruddy fawn marked with black shaft lines from throat to upper breast. There is an ashy gray patch in the centre of the abdomen ; the wings are dark brown like the tail.

This is one of the greatest song-birds of China and one could only wish it were more common in our neighbourhood : you will seldom hear it singing in your garden, but will be more likely to meet it in a closely wooded copse or temple compound in the surrounding country. Its Chinese name is Hwamei (meaning "flower eye") and it is much prized as a cage-bird for its singing qualities. It is also used in South China as a fighting bird.

Nesting habits, etc.—This laughing-thrush generally breeds in the more hilly and wilder country, the nest being placed in a bush near the ground. Twigs, leaves and grasses are the material used with a finer lining, generally of pine needles ; there are four eggs, pale turquoise blue and very glossy.

FAMILY—**PYCNONOTIDÆ**—*THE BULBULS*

The bulbuls are an eastern family and are apparently non-migratory except in the most restricted sense; they have short legs, a strong bill and many of the habits of the flycatchers. To the best of my knowledge we only see one of them though there are several distinct species to be found in different parts of China. The word bulbul is Persian for nightingale though I have never heard the birds sing after dark.

ORDER : PASSERES
FAMILY : *PYCNONOTIDÆ*
C. B. No. : 595

BULBUL (CHINESE)

Pycnonotus sinensis sinensis

(See Plate No. V)

Field identification.—Black cap with white nape (more pronounced in older birds) ; wings and back washed green.

Description.—About 8 inches long, but appears to be smaller, being a slim and active bird. The crown of the head is black with a very distinct white nape which appears to grow larger in its area as the bird ages. The illustration (Plate V) shows a fully adult bird with the maximum development of the white nape. This appears to stand out like a white neck-cloth as the bird has a habit of " bristling " the neck feathers when excited or on the alert ; in younger birds this attractive feature is not nearly so prominent. The back shades from olive-grey to brown freely washed with a yellowish-green hue, while the wings and tail are brown with patches of the same greenish washing ; there is a black line running round the base of the nape. The throat and chin are white, followed by a greenish-brown band across the breast. The rest of the underparts are white, with tinges of greenish-yellow, darker on the flanks.

You may know this bird anywhere by his cheerful bubbling song and quick darting habits among the trees and bushes. The word Bulbul is Persian for nightingale and he and his various relations bear that honoured name throughout the East, though his singing abilities would hardly seem to deserve it, the song being monotonous through lack of variety and acquiring merit only by its spontaneous cheerfulness. The bulbul feeds chiefly on berries, but he is a skilful catcher of flies on the wing and will eat any scraps or bread-crumbs you may care to provide for him ; he is in fact a voracious, active and cheerful bird well worth encouraging to your garden (though he will rob your strawberries and tomatoes if you do not net them), and you may have the pleasure of his company all the year round for the asking, since he is one of our commonest residents.

Nesting habits, etc.—The nest is a fairly deep cup placed in any convenient shrub or tree, often near the ground; it is made of fibres and grasses, roots, pieces of paper or anything handy. Two or more families are reared during the summer, the young birds being more drab in colouring, with an ashy crown and minus the white nape.

The eggs are said to differ considerably in colour but the common local form has a mauve background heavily spotted with different shades of dark red, claret-red and grey.

I have found many nests in low privet bushes in a Chinese nursery, one of them occupied by a small snake which had apparently climbed up to get the eggs.

Plate No. V

COMMON BULBUL

(Adult male with fully developed white nape)

Family—**TURDIDÆ**—*THE THRUSHES*

This is one of the largest families of birds, about 48 varieties being represented in the maritime provinces of China: they are somewhat similar to the flycatchers in formation, but have no hairs over the nostrils. They also have long feet with curved claws, and are more omnivorous than the flycatchers; there are six sub-families of the *Turdidæ* of which only two, the *Turdinæ* (or thrushes proper) and the *Phoenicurinæ* (robins and redstarts) are dealt with here.

Sub-Family—**TURDINÆ**—*THRUSHES PROPER*

There is some confusion in the application of common names to these birds, particularly when we remember that many thrushes are also known as ousels: further, we must remember that the blackbird is a true thrush and only obtained his common name by reason of his colour. The hall-mark of the true thrush is that he generally bears the Latin name of *Turdus*, though this is not common to all members of the family.

Further confusion arises owing to the fact that the babblers (family Timaliidæ) are also known as laughing-thrushes. Also, we usually think of thrushes as song-birds but it is safe to say that you will never hear a true thrush, other than the blackbird, singing in Shanghai. Many of the others are famous song-birds in their breeding-grounds in Siberia, etc., but they are silent, except for their alarm notes, during their short visits in our parts.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *TURDINÆ*
C. B. No. : 645

BLACKBIRD (CHINESE)

Turdus merula mandarinus

(See Plate No. VI)

Field identification.—The smallest of the plain black birds ; bill yellow or orange.

Description.—Length about 10½ inches, a very common resident. It is sufficient to say that the *male* bird has entirely black plumage, though there is a tendency to brownish colouring on the underparts : the *female* has distinctly brownish-black plumage on the upper parts and even lighter brown and chestnut on the underparts. Young birds have brown backs, and buff and brown streaks on the underparts.

The bill is a bright orange yellow, darker towards the tip.

The blackbird is our only singing thrush (for he is a true thrush as the Latin name signifies) and one of our greatest songsters in the breeding season, usually being heard at his best in the very early hours. Wake at the break of dawn on an early summer morning and you may well think that the celestial vault has cracked and the music of the heavenly choir is pouring through, for every blackbird within half a mile of you will be heard pouring out his sweet melody before commencing the labour of the day. Later in the day when all his natural enemies are stirring he is more sparing of his song and you will be more likely to hear his alarm note " t'ck-t'ck " as he scurries into cover on your approach. As the evening shadows draw in you will hear his oft-repeated evening call " peek-peek-peek " which is the blackbird's way of informing his family that it is time to go to bed.

The Chinese name for the blackbird is pei-shih, which means " a hundred tongues," and is indicative of the marvellous vocal powers of this bird.

"Shanghai Birds"

Plate No. VI

Red-tailed Ousel
Dusky Ousel
Blackbird (immature)

Pale Ousel
Grey-backed Thrush
Blackbird (adult male)

Nesting habits, etc.—Our blackbirds usually build high up on a tree, using an outlying fork on which to place the nest, which is made of grasses and twigs with a mud lining and a final or inner lining of pine-needles, soft grasses, etc. We are told that the female bird does all the nest-building while her male partner stands by and sings, but I cannot vouch for this.

In spite of the natural tendency to build high on a tree the birds will often build low down, and in a most exposed position, when they know they are unmolested. I have seen a blackbird's nest 10 feet from the ground on the bare fork of a bough, where the parent birds fed their young undisturbed, while children played on the grass below them.

There are four to six eggs pale green (or blue-green) closely speckled with red and underlying violet and there are two or more broods each season.

Note.—The illustration of the young Blackbird on Plate VI makes him look more brown than he appears to the casual eye. This first streaked plumage shows him to be a true thrush which we are apt to forget when we see him in the full black plumage.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *TURDINÆ*
C. B. No. : 636

PALE OUSEL

Turdus pallidus

(See Plate No. VI)

Field identification.—Olive brown back, grey breast ; note the white tips to tail feathers.

Description.—About 9½ inches long : the upper parts are olive-brown with the crown, breast and flanks grey : the rest of the underparts grey shading to white. The wings and tail are grey-brown and the tail will be seen to be tipped with white particularly on the outer edges. The female is similar to the male but has a tendency to more brown on the head, wings and tail.

You will see this bird in winter-time only, generally where there is thick cover, and the white tail tips will usually be the most prominent identification mark as the bird scurries into cover on your approach. The alarm note is similar to the blackbird's.

Nesting habits, etc.—This bird is said to breed in the Valley of the Amur. The eggs are pale blue-green with reddish-brown spots.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *TURDINÆ*
C. B. No. : 635

GREY-BACKED THRUSH

Turdus hortulorum

(See Plate No. VI)

Field identification.—Upper parts grey ; *male* has grey shaft stripes on feathers of chin and throat ; *female* has brown spots on throat and breast.

Description.—About 9½ inches long. This is another migrant which may be seen in the late winter and early spring, particularly where there is close cover.

The entire upper parts of the male are a distinct blue-grey, while those of the female may be described as olive-grey. The *male* has a white throat with grey stripes on the shafts of the feathers, the breast etc., being pale grey with a heavy washing of golden red round a white centre ; the wings and tail are grey to brown. The *female* has small brown spots on the throat and larger brown spots on the breast, which is yellowish-white and grey.

These thrushes only appear in small numbers as migrants, but are handsome birds well worthy of notice.

Breeding habits, etc.—This bird breeds in Eastern Siberia where it has a great reputation as a song-bird; the eggs are pale green with red spots.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *TURDINÆ*
C. B. No. : 639

RED-TAILED OUSEL

OR

RED-TAILED FIELDFARE

Turdus naumanni naumanni

(See Plate No. VI)

Field identification.—A brown thrush with reddish-brown tail and the white breast splashed with rusty red.

Description.—About 9½ inches long. You will only see this bird as a migrant passing to and from its breeding grounds in the far north : the birds generally travel in large flocks and may be seen feeding in the fields.

The upper parts are a dark but ruddy brown, with blackish wings and a distinctly reddish-brown tail. The breast is rusty red with white edgings to the feathers, giving a spotted or flecked appearance. The females often have black spots on the throat and breast.

Nesting habits, etc.—Breeds in the far north.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *TURDINÆ*
C. B. No. : 639A

DUSKY OUSEL (OR DUSKY THRUSH)

Turdus eunomus

or

Turdus fuscatus

(See Plate No. VI)

Field identification.—A very dark thrush with a distinct necklace of black spots on the upper breast.

Description.—About 9½ inches long. The upper parts from head to tail are dark brown, almost black, and the wings black with chestnut edgings. The throat is pale yellow with black spots on the sides : the breast-feathers are black irregularly edged with white, which gives the distinctive effect of a black necklace of spots on a white background.

This is another winter visitor and will often be found in small flocks feeding in the garden.

Nesting habits, etc.—Breeds in Western Siberia and the nest and eggs are similar to those of the blackbird. Mr. Sowerby states it probably also breeds in the Amur region and Eastern Siberia.

OTHER THRUSHES

Of the remaining thrushes there are only three which might possibly be seen in Shanghai, but as this would be a very rare occurrence no illustrations are given and a short description only is included to assist in identification.

ORDER: PASSERES
FAMILY: *TURDIDÆ*
SUB-FAMILY: *TURDINÆ*
C. B. No.: 637

GREY OUSEL (*TURDUS OBSCURUS*)

This is from 9 to 10 inches long. It is very similar to the pale ousel but the whole head is clear grey with a slight eye-brow and a few white feathers below the eye and chin. The breast and flanks are orange-chestnut.

ORDER: PASSERES
SUB-FAMILY: *TURDINÆ*
C. B. No.: 646

SIBERIAN GROUND-THRUSH (*TURDUS SIBIRICUS*)

About $9\frac{1}{2}$ inches long. A very dark thrush looking almost black, but actually slate-blue to grey-black, with a distinct white eye-brow. The breast is blue-grey, with irregular white feathers on the underparts in young birds.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *TURDINÆ*
C. B. No. : 656

WHITE'S THRUSH

OR

GOLDEN THRUSH

(*Turdus aureus or Oreocincla aureus aureus*)

About 11½ inches long this must be the largest of our thrushes : quite a number of these handsome and striking birds come to us in the course of migration but they are only too seldon seen as they keep to the woods and copses.

The upper parts are golden brown, each feather showing a brown and black edge, the wings brown, striped with pale brown and black. The breast and flanks are pale buff with crescent-shaped markings of black, giving the plumage a scaled appearance : the tail is olive-brown and black with white tips and white feathers below.

SUB-FAMILY—PHŒNICURINÆ—*THE REDSTARTS AND "ROBINS"*

There are apparently divided opinions as to the correct classification of these birds and I have followed *La Touche* in placing them under the above sub-family. They are all robin-like little birds and we only have to deal with three of them.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *PHŒNICURINÆ*
C. B. No. : 684

DAURIAN REDSTART

Phœnicurus auroreus auroreus

(See Plate No. VII)—*Frontispiece*

Field identification.—A little bird with black wings having a white patch in the centre, a rufous breast and tail, the latter being black down the centre. Note the habit of shivering the tail.

Description.—Length about 6 inches. The *male* has a grey crown and nape with the rest of the head, throat and back, deep black. The wings are black with a distinct oblong patch of pure white in the centre. The tail rufous-chestnut with black feathers down the centre, the breast and underparts are a bright ruddy chestnut.

The *female* is olive-brown above and has only a light rufous washing on the breast and underparts ; the white patch on the wings is smaller and less distinct. Length at least half an inch less than the male.

These birds are only seen in Shanghai in the winter months migrating from the south to their breeding-grounds in North China which they reach in March. They have a quick nervous manner and a peculiar habit of shivering their tails, which in conjunction with the distinctive plumage should make them easily recognizable.

Nesting habits, etc.—Although these birds usually breed further north some are said to nest in Kuling. The nest of moss, grasses, etc., is placed in a hole in rock or wall, and there are at least two varieties of eggs, some being pinkish-white and some pale bluish-green in background, both being speckled and blotched with brown and reddish-violet.

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *PHNŒICURINÆ*
C. B. No. : 697

BLUE-TAILED ROBIN

OR

SIBERIAN BLUE-TAIL

Ianthia cyanura

(See Plate No. VII)—*Frontispiece*

Field identification.—A small bird, blue to olive above with a buffish-white breast and orange-chestnut flanks.

Description.—Length about 5 inches. A small robin-like bird. When seen in winter the dark blue of the head and back is much tinged with olive ; the wings are brown with some blue tints, and the tail blue mixed with brown. The breast is pale buff shading to white and washed orange-chestnut on the flanks.

The *females* are more olive-brown above, but have the blue tail of the male. The breast is much darker than the male's being almost olive-brown.

These birds come to us only in winter in the course of migration. They have the beady eye and jaunty carriage of the English robin and will usually be seen feeding either on the ground or in low bushes, etc.

Nesting habits, etc.—Breed in Northern Siberia and in Japan.

Note—**These birds are sometimes called Bluestarts**

ORDER : PASSERES
FAMILY : *TURDIDÆ*
SUB-FAMILY : *PHŒNICURINÆ*
C. B. No. : 691

RUBY-THROAT

Calliope calliope

Field identification.—An olive brown bird with ruby-red throat and grey (or grey-brown) breast.

Description.—Length about 7 inches. The upper parts are olive-brown with wings and tail more a plain brown. There is a white eye-brow and a moustache-like stripe across the cheek, also white. The throat and cheek are a bright ruby-red with a black border ; the breast is grey and the abdomen white.

Females have the throat white and the breast much inclined to brown, but some older birds may be seen with the throat almost as red as that of the male.

These birds come to us only as stragglers in course of the spring and autumn migrations, though large numbers are seen at Shaweishan Island.

Nesting habits, etc.—The breeding grounds are in Kamtschatka, Siberia, etc.

FAMILY—**MUSCICAPIDÆ**—*THE FLYCATCHERS*

These birds are very clearly described by their name, and their physical peculiarities are particularly fitted to their trade, which is catching flies on the wing. The bill is usually wide and flattened, and there are numerous hairs above the nostrils ; the feet and legs are short and weak, which is only to be expected in a bird which feeds when flying. Of the twelve or more varieties which may be found on the east coast of China, I only know six to deal with here.

Plate No. VIII

INCE'S PARADISE FLYCATCHER (Male)

Female (with short tail)

Male in white phase

ORDER : PASSERES
FAMILY : *MUSCICAPIDÆ*
C. B. No. : 626

INCE'S PARADISE FLYCATCHER

Terpsiphone incei

(See Plate No. VIII)

Field identification.—Two long flexible tail feathers nearly a foot long flying straight out behind the bird. The dominant colour may be either chestnut-red or pure white (*see* description).

Description.—Length, excluding the two long tail extensions of the male, about 8 inches. These peculiar tail extensions add 9 or 10 inches to the total length of the male.

A further peculiarity of this bird is that it has two distinct phases of plumage, the second of which changes all the chestnut feathers into pure white. It also appears that in certain stages the males have a short tail like the females, but I have never seen any but long-tailed males in Shanghai. There is no exact knowledge as to the changes of plumage but it appears probable that the males assume the white plumage after two or three years.

The *male* has the crested head and neck blue-black with a distinct green sheen when seen in a strong light ; the whole of the upper parts below the neck are a deep rufous chestnut ; the wings, chestnut with some black shaft lines ; the tail chestnut red with black shafts ; the breast and flanks are ashy grey, and the rest of the underparts white. In the white phase the chestnut feathers are all replaced by white with black shaft-lines.

The *female* is similar to the male in red plumage, except that she lacks the long tail-extensions and the colouring is duller.

These birds are almost equally beautiful in either phase of plumage and it might perhaps be better to substitute the word *red* for *chestnut* in describing them. When in flight the long tail feathers fly straight out behind with a slight fluttering movement like two pieces of silk ribbon and when the bird halts in the air to catch a fly, they whirl around it in a halo of colour.

Note.—The small figure at the foot of Plate No. VIII gives an idea of the male bird in the white phase of plumage; he is seen in flight with the long tail extensions stretched out behind him.

Nesting habits, etc.—These birds come to us in the early summer and lay their eggs in June. The cup-shaped nest of varied material such as moss and feathers bound together with cob-webs, is placed fairly high on a tree. There are three or four eggs of pale orange spotted with brown over lilac-grey specks. The birds have a habit of decorating the outside of the nest with mosses, cocoons and even pieces of paper.

ORDER : PASSERES
FAMILY : *MUSCICAPIDÆ*
C. B. No. : 619

BROAD-BILLED FLYCATCHER

Alseonax latirostris poonensis

Field identification.—A brown and grey little bird with a brown bill very broad at the base ; white eye-ring.

Description.—About 4½ inches long. The head and upper parts are greyish-brown darker on the crown ; wings and tail brown. The breast and flanks are grey and the rest of the under-parts greyish-white. There is a white ring round the eye. The brown bill is very wide at the base forming almost an equilateral triangle.

This dull little flycatcher comes to us only as a migrant in spring and autumn and you will generally see it perched on a tree from which position it darts out to catch flies, etc., on the wing.

Nesting habits, etc.—The birds breed in the north and also in Japan, nesting in the month of May.

ORDER : PASSERES
FAMILY : *MUSCICAPIDÆ*
C. B. No. : 601

GREY-SPOTTED FLYCATCHER (CHINESE)

Hemichelidon griseisticta

Field identification.—Small brown bird with whitish breast spotted grey from throat to flanks.

Description.—Length about 4½ inches. This is another bird of passage, and a rather dull little bird, but easily distinguished by the elongated grey spots on throat, breast and flanks. The upper parts are grey-brown and very similar to those of the flycatcher previously described.

The beak is dark brown and much narrower than that of the broad-billed flycatcher.

Nesting habits, etc.—Does not breed in our neighbourhood but passes up and down the China Coast in migration between its winter quarters in the Philippines, etc., and its breeding grounds in the north.

ORDER : PASSERES
FAMILY : *MUSCICAPIDÆ*
C. B. No. : 606A

TRICOLOR FLYCATCHER

Xanthopygia narcissina xanthopygia

or

Xanthopygia tricolor

Field identification.—A small bird with brilliant yellow breast ; wings black with white band.

Description.—Length about $4\frac{3}{4}$ inches. This is a very brilliant little bird only too seldom seen in our neighbourhood where it may appear as a summer visitor. It has the bright yellow underparts of the oriole, sharply contrasted with the deep black of the head, tail and wings, the latter having a patch of clear white which completes the " tricolor " scheme of colouring. It has also a prominent white eyebrow. In flight it will be noted there is a bright yellow patch showing on the back between head, wings and tail.

Nesting habits, etc.—The nest made of leaves and roots lined with hair or any soft material, is placed in a hole in a tree, generally close to water. There are five yellowish-pink eggs speckled with pale red or brown, and purple.

OTHER FLYCATCHERS

The following also occur rarely as migrants, and are here described shortly to assist identification.

ORDER : PASSERES
FAMILY : *MUSCICAPIDÆ*
C. B. No. : 605

RED-THROATED FLYCATCHER

(*Siphia parva albicilla*)

About 4½ inches long. The upper parts are dull grey-brown like the other small flycatchers, and the breast grey. The distinguishing mark in the males is a pale red throat, but the females lack this, having in place of it a tawny tinge on the breast. It is also to be noted that in the autumn the red throat of the males is replaced with white. There is a distinct eye-ring, almost white in colour.

ORDER : PASSERES
FAMILY : *MUSCICAPIDÆ*
C. B. No. : 602

SIBERIAN FLYCATCHER

(*Hemichelidon sibirica sibirica*)

About 5 inches long. The upper parts from head to tail are dull brown, with wings and tail slightly darker ; there is a white eye-ring and the cheeks are brown ; the chin is white and the breast either white striped with smoky-grey or entirely smoky-grey in colour. You may see it among the trees and bushes catching flies on the wing.

Family—LANIIDÆ—*THE SHRIKES*

The shrikes, otherwise known as butcher-birds, are rather wicked looking birds with a strong hooked bill rather like a hawk's in its formation. They have powerful legs and feet constructed for holding their prey and the tail is generally long. Most of the shrikes have a kind of moustache across the face which adds to their fierce appearance.

Our common "butcher-bird" is the red-backed shrike, but I have added five others which may be seen here from time to time.

ORDER : PASSERES
FAMILY : *LANIIDÆ*
C. B. No. : 832

RED-BACKED SHRIKE (CHINESE)

Lanius schach schach

(See Plate No. IX)

Field identification.—Grey crown and nape and red back. A distinct black stripe across the face and behind the eye. Strong hooked bill.

Description.—From 10 to 11 inches long. This is our commonest shrike and remains with us all the year round. From crown to upper back is pearly-grey, blending thence with the rich rufous colour of the back down to the tail, which is brown to black with lighter underfeathers tipped white and grey; this gives the effect of barring when the bird is at rest with its tail hanging straight down below it. The throat and upper breast are white, below which there is a rufous washing, darker on the flanks. The wings are mainly black with a white spot at the base of the longest feathers. One of the most characteristic marks of this bird is the black line running across the forehead, across the eyes and continued to the ear-coverts. This gives the appearance of a fierce moustache well in keeping with the bold character of the bird.

This shrike has a very harsh call, or series of calls, beginning with "Wark-Wark-Wark" and finishing with something that sounds very much like "beat-it; beat-it." When in softer mood the bird is no mean songster and has a habit of imitating, softly and sweetly, the songs of many other birds. It is greatly feared by smaller birds, presumably with good reason and you will hear all these giving their danger-call when a shrike approaches, the bolder among them (such as the bulbuls) flying out to drive it away from the region of their nests.

"Shanghai Birds"

Plate No. IX

Thick-billed Shrike
Red-backed Shrike
Great Grey Shrike

Bull-headed Shrike

A shrike is generally called a "Butcher-bird" and you may find small frogs, beetles, etc., impaled on thorns near its nesting place, this being the habit that has earned it the name of "butcher" since it is the custom of those tradesmen to hang up their meat. A shrike will come to your bird-table in winter, and after eating all he requires, carry off small pieces of bread and hang them up in nearby bushes, using either a spike or the fork of two twigs to hold the morsel. In spite of these tit-bits being immediately stolen by sparrows, the shrike will continue this performance daily after finishing his meal, thus proving that his instinct is stronger than his common-sense.

Nesting habits, etc.—This shrike builds a deep cup-shaped nest made of twigs, roots, dried grasses, etc., in a thick bush or clump of sword-grass, or even fairly high up in a tree; it is lined with finer grasses or any similar material. Four to six eggs are laid, yellowish-green in colour, spotted with various shades of brownish-red over grey, the spotting being much heavier at the larger end of the egg.

ORDER: PASSERES
FAMILY: *LANIIDÆ*
C. B. No.: 829c

PHILIPPINE RED-TAILED SHRIKE

Lanius cristatus lucionensis

Field identification.—Like a small red-backed shrike with narrow tail rufous-brown.

Description.—About 7½ inches long and therefore much smaller than the red-backed shrike which he greatly resembles in general appearance. The whole crown and nape down to the back is a beautifully clear grey, shading into a grey-brown and followed by the rufous brown of the upper tail coverts. There is the usual black moustache running back from the nostrils and this is bordered by a narrow white eyebrow. The wings are brown with a little rufous. The throat and underparts are white to pale grey, but breast and flanks are heavily washed with rufous and on a bright summer's evening I have seen these birds appear almost golden in flight, suggesting an oriole. The tail is straight and narrow, rufous-brown with a lighter patch at the tip.

The distribution notes in "Chinese Birds" states they are recorded in Kiangsu in May and August to October, while *Gee and Moffett* say "probably only a few pairs remain to breed." I have seen these birds in increasing numbers during recent years, from early summer to autumn and think they must remain here to breed, though this may be a recent movement.

Nesting habits, etc.—These birds usually breed further north, but I suspect that some of them breed here. The nest and eggs are said to be similar to those of the red-backed shrike (*q.v.*)

ORDER : PASSERES
FAMILY : *LANIIDÆ*
C. B. No. : 832A

GREY-BACKED SHRIKE

Lanius schach tephronotus

Field identification.—Smaller than and very similar to the red-backed shrike, but grey from crown to tail coverts.

Description.—Length about 9 inches. I include this shrike with all due deference to the modern authorities : *Pere David* stated in " Les Oiseaux de la Chine " that the bird occurred in Shanghai, but *La Touche* says he has no proof of this. I can only say that I have seen birds answering to the description here given and one day early in July I made a rough sketch of the colour-plan of such a bird which was sitting on my fence. From crown to tail coverts the bird is pure grey ; this is followed by the distinct line of the rufous tail-coverts, and then the dark brown tail ; the throat is white and the breast an almost golden fawn. In all other respects it answers to the description of the red-backed shrike, but the most apparent difference is its smaller size (by about two inches).

Nesting habits, etc.—No local records.

ORDER: PASSERES
FAMILY: *LANIIDÆ*
C. B. No.: 827

GREAT GREY SHRIKE (CHINESE)

Lanius sphenocercus

(See Plate No. IX)

Field identification.—A large grey and white shrike with black and white wings and tail and a black stripe across the face.

Description.—About 12 inches long. The black beak very strong and hooked. The upper parts from crown to lower back are clear pale grey. The throat, breast and abdomen are all white. The wings are black with a large double patch of white near the centre, and white tips to a number of the wing-quills. The tail is black with white tip and edges to many feathers. The most prominent mark is the black stripe across the face giving a moustache-like effect.

This very handsome bird is seldom seen here and then only in the winter.

Nesting habits, etc.—Breeds in North China, Mongolia, etc.

ORDER : PASSERES
FAMILY : *LANIIDÆ*
C. B. No. : 830

BULL-HEADED SHRIKE

Lanius bucephalus

(See Plate No. IX)

Field identification.—A small brown shrike with wavy brown lines across the grey breast.

Description.—About 8 inches long. The cheeks and ear-coverts are black giving the effect of the "moustache" common in shrikes. The upper parts are chiefly brown to rufous but the back is actually grey suffused with rufous. The tail is dark brown tipped with black and grey. The wings dark brown with pale buff edgings.

The most noticeable plumage is on the breast which is pale grey to white, each of the feathers having a fine brown edging, which gives the effect of a series of wavy lines or brown semi-circles across the breast. These waved lines are much more regular and dense in the *females*.

The hooked bill is brown.

This is another winter visitor here, and not often seen.

Nesting habits, etc.—Breeds in Japan, Korea and North China.

ORDER : PASSERES
FAMILY : *LANIIDÆ*
C. B. No. : 828

THICK-BILLED SHRIKE

Lanius tigrinus

(See Plate No. IX)

Field identification.—A small rufous-backed shrike with black bars across the back.

Description.—About 7 inches long. In general appearance much like the red-backed shrike, but easily distinguished by the smaller size and the barred upper parts peculiar to this species. The forehead, eye-region and ear-coverts are black, the crown nape and upper back light grey, the rest of the upper parts from lower back to upper tail are rufous barred with black ; the tail is russet brown with white tips to some feathers. Under parts from throat to abdomen, white.

This little shrike is a summer visitor to the Yangtze Valley but is not often seen in the Shanghai neighbourhood.

Nesting habits, etc.—Nests in the more mountainous districts ; makes a cup-like nest of roots, grasses, moss, etc. ; eggs, orange-yellow lightly speckled with dark brown and grey.

Family—PERICROCOTIDÆ—

THE MINIVETS AND CUCKOO-SHRIKES

These birds are very near to the shrikes, and have only recently been divided from them under the above name. They are better known in India and although there are said to be four different species visiting the Yangtze Valley, we see very little of them. The single member of the family described below would have been omitted from this small volume if it were not for his insistent call which has brought him into prominence. Most of the cuckoo-shrikes have a tendency to grey plumage.

ORDER : PASSERES
FAMILY : *PERICROCOTIDÆ*
C. B. No. : 812A

BLACK-WINGED MINIVET

OR

BLACK-WINGED CUCKOO-SHRIKE

Lalage melaschista avensis

or

Campephaga melanoptera

Field identification.—A grey bird with black wings and tail, generally located by his monotonous cry in a minor key.

Description.—About 9 to 10 inches long ; blue to ashy-grey in colour with black wings and tail ; bill black. The grey of the upper parts is bluer at the head and a more pure grey towards the tail ; the underparts are lighter grey. The wings and tail are deep black and any small sign of white at the abdomen and below the tail can hardly be noticed by the casual observer.

This bird arrives in May or early in June and then either disappears or becomes silent and so is not noticed. It would in fact hardly be noticed at all if it were not for its monotonous and yet striking song. I hardly know how to describe it ; it consists of three or four rapidly repeated notes followed by a slightly drawled lower note and then one a little higher. The whole theme is in a minor key and is repeated *ad nauseam*. I doubt if this cuckoo-shrike stays long with us and, if it did, I think it would be very unpopular. Please do not confuse its song with that of the Indian cuckoo (or "one-more-bottle" bird) which is equally monotonous, but much more *staccato* and louder in tone.

Nesting habits, etc.—I have no proof that this bird nests in our neighbourhood, but seeing that it is known to be here in May and June it is quite likely that it may do so [*La Touche* gives its distribution as "all China," except the extreme north (summer)] : The nest is a small cup of lichens etc., bound with cobwebs and placed at the extremity of a tree-branch. There are three or four eggs, bluish or greenish-white, streaked with brown, grey and purple.

Family—**SYLVIIDÆ**—*THE WARBLERS*

It is very difficult to give any general idea of the warblers since there are so many of them, varying widely in appearance and habits. Furthermore, the very name "warbler" suggests a striking gift of song, whereas our warblers cannot be described as great song-birds. They might be described as a wide class of small birds, generally having bristles or hairs on the gape and fairly strong bills; their singing is usually confined to a short, monotonous, and sometimes harsh, phrase.

ORDER : PASSERES
FAMILY : *SYLVIIDÆ*
C. B. No. : 729

GREAT REED-WARBLER (EASTERN)

Acrocephalus arundinaceus orientalis

(See Plate No. VII)—*Frontispiece*

Field identification.—The large brown-coloured beak is distinctive and gives the bird a heavy appearance. Brown upper parts : yellowish-white below.

Description.—About 7 inches long. The upper parts are brown, and the underparts yellowish-white to fawn ; the wings and tail brown. There is not much of a distinctive nature about this bird except that the bill is heavier than usual for its size. There is a yellowish-brown eyebrow, but this can seldom be noticed.

The birds inhabit the reed-beds and can usually only be seen when the males perch on the reed-tops to deliver their harsh song.

Nesting habits, etc.—The nest is a deep cup of grasses, etc., attached to the reeds, usually just above the water. There are three to five eggs, pale green spotted and blotched brown and purple.

ORDER : PASSERES
FAMILY : *SYLVIIDÆ*
C. B. No. : 732

SCHRENK'S REED-WARBLER

Acrocephalus bistrigiceps

(See Plate No. VII)—*Frontispiece*

Field identification.—A small reed-warbler with a double eye-brow, the upper line dark brown, the lower yellowish.

Description.—About 4½ inches long. This little reed-warbler is not so common as the one previously described, and the only distinctive mark is the double eye-brow. The upper parts are mostly russet-brown, the lower parts white, tinged with fawn on the breast and washed with brown on the flanks. The bill is small and pointed.

This bird passes us in migration and is also a summer visitor in the Yangtze valley. It has a somewhat feeble little song, not unpleasant to hear.

Nesting habits, etc.—Usually attaches its nest to reeds above water, but also builds in grasses on swampy land. There are four or five eggs greenish-white "almost obliterated by light brown freckling and blotches, etc."

ORDER : PASSERES
FAMILY : *SYLVIIDÆ*
C. B. No. : 740

FAN-TAIL WARBLER (CHINESE)

Cisticola juncidis tinnabulans

(See Plate No. VII)—*Frontispiece*

Field identification.—A tiny buff coloured bird rising in jerky flight, the tail spread fan-wise.

Description.—About 4 inches long. It is very seldom that you will see this little warbler at close quarters ; its habit is to hide in the long grass and rise rapidly into the air, either to make a display flight above its mate, or to lead any disturber away from its nest-site. The general appearance is that of a buff or light-brown little bird flying upward with a jerky " up and down " flight, something like the lark's, and with the tail spread out to its widest extent.

The upper parts are chiefly brown, the feathers bordered with rufous or grey ; the tail is barred across with brown, black and white. The throat and abdomen are white and the breast and flanks are washed with rufous brown.

When rising in the air the bird utters a shrill cry of " Peet-Peet-Peet-Peet," by which its presence can be located from a great distance, though it is not always easy to see even when heard ; on coming back to the ground the call at once changes to a sharp Chip-Chip-Chip as it disappears into the grass. I am told that the cry being so often heard while the bird cannot be seen, has given rise among Chinese children to the amusing belief, that the " Peet-Peet-Peet " of this warbler is the cry of the earth-worm.

Nesting habits, etc.—If you wish to locate the nest of this bird during the early summer in Shanghai, you must first find a large patch of tall grass with fluffy white seed-tops ; this provides both the material and the site for the nest. The nest itself is a deep pocket made of the grass-down bound together with cob-webs and fastened with the same material to several grass-stalks, about 6 to 18 inches from the ground. Five or six eggs are laid, bluish-white in colour, speckled and spotted with different shades of brown, red and purple.

ORDER : PASSERES
FAMILY : *SYLVIIDÆ*
C. B. No. : 777

BUSH-WARBLER (CHINESE)

Horornis cantans canturians

(See Plate No. VII)—*Frontispiece*

Field identification.—Brown with a greyish-white breast. A very distinctive song beginning on low notes and finishing on a high trill.

Description.—The *male* is 6 to 6½ inches long and the *female* about 5¼ inches. This difference in the sizes resulted in the female being mistaken for a separate species until quite recent years. The upper parts of both sexes are ruddy brown, the *females* a trifle more ruddy in appearance than the *males*. The underparts are dull white to grey shaded with brown towards the flanks; the wings and the tail are brown to russet.

A few of these warblers remain in the Yangtze Valley for the winter but our local birds come to us only in April and remain for the summer months. Whether we like it or not their little song is one of the most familiar sounds of the early summer and it is certainly sweet if monotonous. The opening notes are suggestive of water being poured from a bottle, but this sound at once runs into a high-pitched trill, only to stop with a jerk as if the bird had been disturbed, and then with equal suddenness, to begin all over again.

The male warbler will establish himself in a tree, probably near to his nest, and repeat his song most insistently only to change to the alarm note of " Jug-Jug-Jug " or " Chip-chip-chip " on the appearance of any marauding bird such as the shrike or magpie, or the too near appearance of a human being.

Nesting habits, etc.—The nest built in early May is domed, with an entrance at the side, and loosely made of grass, leaves, etc., and lined with finer grasses, seed-fluff, or even feathers ; it is placed in a thick bush quite close to the ground. Four or five eggs are laid, light to darker red in colour, often capped or densely speckled with a darker shade of red.

OTHER WARBLERS

The following may be seen as late autumn or winter migrants :—

ORDER : PASSERES
FAMILY : *SYLVIIDÆ*
C. B. No. : 727

STREAKED GRASSHOPPER-WARBLER

(Locustella lanceolata)

Length 4½ inches. Upper parts olive-brown with black streaks in centre of feathers. Underparts white with yellow to fawn wash on breast and flanks. The breast is distinctly streaked with black or brown. To be found mostly in grass-land or wheat-fields.

ORDER : PASSERES
FAMILY : *SYLVIIDÆ*
C. B. No. : 726B

DAVID'S GRASSHOPPER-WARBLER

(Locustella certhiola minor)

Length about 5 inches. Chiefly olive-brown above with crown, heavily striped black, and most feathers with black centres. The cheeks are pale yellowish-white and there is a grey eyebrow. Tail brown with black shafts and grey tips ; wings chiefly brown, many feathers having black centres and pale olive or white edgings. Underparts white to pale grey washed (more or less) on breast and flanks with olive-brown. To be seen in paddy-fields in September and October.

Family—**ORIOLIDÆ**—*THE ORIOLES*

These are medium sized birds, with a beak about as long as the head, and chiefly yellow as to plumage; the plumage of the male and female differs and the young birds have stripes on the lower parts. They are exclusively tree-dwellers, and are never seen feeding on the ground.

There are four different orioles to be found in China, but only one of these, the black-naped oriole, is to be found here, and then only as a summer visitor.

ORDER : PASSERES
FAMILY : *ORIOLIDÆ*
C. B. No. : 885

BLACK-NAPED ORIOLE

OR

GOLDEN ORIOLE (LOCAL)

Oriolus chinensis indicus

(See Plate No. X)

Field identification.—A golden yellow bird with black on head, wings and tail.

Description.—Length about 9½ inches. The main colouring of these beautiful birds is a brilliant golden yellow. There is a black stripe running from the base of the bill, through the eye and round the nape of the neck. The lower and central part of the wings and most of the tail is black. *Females* are more or less heavily washed with green on the back and the colouring is generally duller. *Young birds* have brown on the back and a great deal of green in place of yellow, the breast feathers being white with black shafts ; the white and green is gradually displaced by yellow until the adult males are as described above : even the older females are said to exchange some of the green back feathers for yellow in the course of years.

The orioles arrive in Shanghai almost exactly on the first of May and leave at the end of the summer when the families are reared.

The call notes of these birds are very distinctive. The signal call is a cat-like mew, very often mistaken for a cat's call by people who are unfamiliar with the bird. The song, or display call of the male, consists of a series of low melodious notes whistled as though through a wooden instrument ; it is difficult to describe but will never be forgotten when once heard.

To see these birds in and around Shanghai, the tallest and most leafy trees should be visited in the early mornings, as they are almost entirely tree-dwellers and remain hidden by the foliage during the heat of the day.

BLACKNAPED (OR GOLDEN) ORIOLES

Male

Female

Nesting habits, etc.—The nest is usually placed high up in a shady tree, though there is one local tree heavily armed with sharp thorns in which I have seen nests quite low down. The nest is an oblong cup made of grasses, roots, etc., bound together with cobwebs and usually placed in the fork of a branch well removed from the trunk. There is a neat lining of fine grass-tops, pine-needles, etc., in which from two to four eggs are laid, rose pink with dark crimson and lavender-grey spots.

FAMILY—**STURNIDÆ**—*THE STARLINGS*

This large and very widely distributed family is not very well represented in China and, though some others may pass us in migration, I only know of one member of the family which stays with us, this being the crested mynah. Starlings are known in England as the smallest of the birds which habitually walk (instead of hopping) and their gait is slow and clumsy, even if there is an obvious effort to make it stately. They are gregarious birds and usually build their nests in holes in trees.

ORDER : PASSERES
FAMILY : *STURNIDÆ*
C. B. No. : 919

CRESTED MYNAH (CHINESE)

OR

"PAKO" (*Chinese name*)

Aethiopsar cristatellus cristatellus

(See Plate No. XI)

Field identification.—In flight, this is a black bird with a short tail, showing a white patch above and below the wings. When perching or on the ground, a black bird with a rough crest at the base of the bill.

Description.—About 11 inches long. When seen with the wings folded the bird appears to be all black, but at close quarters you may see a white tip to the tail and a small white bar at the edge of the wings, this being all that is to be seen of the folded white wing feathers. There is a rather grotesque black crest at the base of the bill which distinguishes this from any other black bird. When the bird is in flight the opened wings show a large white patch both above and below, creating the illusion that the bird has four wings after the manner of those depicted on the Willow Pattern plate. (The smaller figure in Plate No. XI shows the white patch below the wings).

The call notes of the mynah are cheerful and not unmusical, and they have a suggestion of a trill in every note as if the bird habitually rolled its "R's." In addition it has no mean gift of song and can imitate the calls of other birds and any familiar sound of the fields and farmyard. For this reason the mynah is a very popular cage-bird and can be taught to talk as well as any parrot. When giving a display in the wild state, the bird can generally be seen squatting high up in a tree where it will remain for many minutes going through its performance.

Nesting habits, etc.—These birds are typical starlings and have the usual habits of the family. The Chinese name " Pako " means " eight brothers " and probably arose from the habit of flying round in family parties. There are two broods a year so that each family is likely to number about eight by the end of the breeding season. The nest is made of any available rubbish, often including discarded snake-skins, placed in any convenient hole, usually in a tree. There are four and sometimes more eggs in each clutch, plain green-blue in colour.

CRESTED MYNAH (or "Pako")

(Small figure shows white markings on underwings)

Family—FRINGILLIDÆ—

THE FINCHES AND BUNTINGS

This is a very wide family of comparatively small birds, chiefly remarkable for a short, thick, powerful bill especially constructed for breaking open seeds. This bill is especially remarkable in the hawfinches and to a lesser degree in the other finches and buntings. The family is now usually divided into three sub-families and I have here followed the classifications accepted by *La Touche.*

Sub-Family—COCCOTHRAUSTINÆ—

THE HAWFINCHES

These are, speaking generally, the largest of the *fringillidæ* and have a particularly powerful bill. They are gregarious in their habits, and have a loud and not unpleasant song. The common name of grosbeak is especially descriptive of these birds.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *COCCOTHRAUSTINÆ*
C. B. No. : 956

BLACK-TAILED HAWFINCH (YANGTZE)

OR

BLACK-HEADED HAWFINCH

Eophona migratoria pulla

(See Plate No. XII)

Field identification.—Large head with black cap and mask, very heavy conical bill, yellow.

Description.—Length 7 to 7½ inches. The entire head of the *male* is black, making the conical yellow bill stand out very clearly. From the neck to the base of the tail is grey to brown ; the tail is blue-black and slightly forked. The breast is grey with fawn washing, and the abdomen and under tail feathers are white. The wings are black with white points and the under wing-feathers are brown.

The *female* differs from the male in having a grey-brown head without the black mask, while the black of the wings and tail is more or less replaced with grey.

You may see these birds at any time of the year, but more frequently in the winter, feeding in small flocks under the trees in your garden, where they crack the fallen seed-pods with their strong bills. When disturbed, the whole flock flies off in unison with a distinct whirring sound, and you may then note the light patch of colour between black wings and tail which is one of the distinguishing marks of the species.

The hawfinch has a loud though pleasing song and the method of delivering it reminds one of a parrot's whistling. You will hear it more frequently in the spring though it is often to be heard on a fine sunny day in winter.

"Shanghai Birds" *Plate No. XII*

Common Hawfinch (Far Eastern)

Blackheaded Hawfinch

(Male) (Female)

Note.—The female Blackheaded (or Yangtze) Hawfinch shown right-centre, does not have the black head.

Nesting habits, etc.—As in everything else, the hawfinch loves company in his nesting site and I have frequently noticed their nests in trees where a blackbird or oriole has already built. The nest is large and cup-shaped with an outside covering of twigs and leaves, and an inside lining of grasses and small leaves welded together with mud.

There are four beautiful eggs, light green in colour with large spots and delicate lines of brown.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *COCCOTHRAUSTINÆ*
C. B. No. : 954

COMMON HAWFINCH (FAR EASTERN)

Coccothraustes coccothraustes japonicus

(See Plate No. XII)

Field identification.—Similar in general appearance to the black-headed hawfinch, but without the black crown and mask. Tail brown (instead of black) and beak grey (instead of yellow).

Description.—Length 7 to 7½ inches. This is the common hawfinch of Japan and almost exactly like the common hawfinch of England. In this part of China it is an early spring visitor only. The head and nape of this bird shade from buff to brown with black markings round the eyes and on the chin and throat. The rest of the upper parts are grey to brown. The breast and flanks are vinous grey, and the abdomen and under tail feathers white. The wings are brown with black and white ; the tail brown, tipped with black and white.

The *female* has a brown-grey head and lacks the black face-markings.

Nesting habits, etc.—This bird breeds in Japan (where it is a resident) and in a few cases has been known to breed in China, but always further north. Nest and eggs are similar to those of the common hawfinch of England, *i.e.* nest of twigs lined with grasses etc., and four to six eggs, pale green-grey with purple and brown spots and lines.

OTHER HAWFINCHES

Either of the following may be seen as migrants :—

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *COCCOTHRAUSTINÆ*
C. B. No. : 956A

LESSER BLACK-TAILED HAWFINCH

(Eophona migratoria migratoria)

This bird is almost exactly similar to the black-tailed hawfinch previously described, but smaller, being about 7 inches or less in length. The bill is not so highly arched as the larger bird's and the tail is noticeably shorter.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *COCCOTHRAUSTINÆ*
C. B. No. : 955A

MASKED HAWFINCH (CHINESE)

(Eophona personata magnirostris)

This is more likely to be seen as a cage-bird, but it does pass this way in course of migration. It is a large heavy bird slightly longer than the black-headed hawfinch and with a very large yellow bill. The plumage is very similar to the black-headed bird's but the black " mask " is not so deep, thus leaving the cheeks and sides of neck grey.

Sub-family—**FRINGILLINÆ**—*THE FINCHES*

This group of finches are distinguished by certain differences in the formation of the bill which make them distinct from the other finches. The most noticeable of these distinctions is that the cutting edges of the two mandibles are in contact all along the bill. Of the whole group some dozen or more have been observed passing this way in migration, but they cannot be considered local birds and I am therefore describing only the Chinese tree-sparrow; the birds thus omitted consist of the bullfinches, rose-finches, greenfinches, redpolls, brambling, siskin and snow-finches.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *FRINGILLINÆ*
C. B. No. : 1006

TREE-SPARROW (CHINESE)

(*Locally known as "House-Sparrow"*)

Passer montanus

This bird is far too familiar about our houses and gardens to require any special description or illustration. The main object of including it here, is to point out that it is this tree-sparrow which takes the place of the house-sparrow *(Passer domesticus)* on the China Coast. It is a little over 5 inches long, the upper parts being different shades of brown from crown to tail with black streaks on the upper back ; a patch below the eyes, a spot on the ear-coverts, and the chin and throat, are black. The underparts are ashy grey, the wings are brown to buff with two pale bands across the quills. The bill is black but becomes brown in winter.

Nesting habits, etc.—The natural nesting place is in the trees but the birds of our densely inhabited areas nest almost always in and about the houses, placing the rough nest of grass and rubbish in any convenient cavity. There are two or more broods and the eggs vary considerably both as to number and colour. They may be described as a greenish-white egg more or less densely spotted and speckled with browns, purples and grey-green.

Sub-family—EMBERIZINÆ—*THE BUNTINGS*

The buntings are a very numerous sub-family and, as nearly all of these seen in Shanghai are either migrants or winter visitors, they are somewhat difficult to identify with certainty. *La Touche* states there are 28 different buntings in East China, of which we might see perhaps ten or more in our district.

Speaking generally, I would describe buntings as graceful little birds between 5 and 6 inches long, usually having distinct streaks of brown or black in their plumage. Some carry much gayer apparel such as yellow breasts and underparts, but in Shanghai you are more likely to see the more sparrow-like birds streaked with brown and darker shades. Many buntings have the lower tail-feathers tipped white or entirely white, and these make an easily noticed mark of identification as the bird flies away from you.

Père David in describing several buntings draws particular attention to their singing powers and you may sometimes hear their sweet canary-like song in the early spring, before they move off to their breeding-grounds.

I have described below nine of the buntings which the careful observer may be able to identify here between late autumn and early spring. As they do not, to my knowledge, breed in our neighbourhood, I have mentioned nothing of their eggs and nests and it is sufficient to say that the majority of buntings nest either on the ground or low down on a shrub or tree.

I would have liked to have included in this list, the gaily-appareled *yellow-breasted bunting* (Emberiza aureola) with its black head and brilliant yellow breast, since many readers must have known it as a table delicacy under the name of the "rice bird:" but, it seldom, if ever, comes our way and the many thousands of these beautiful little songsters which are netted for the cooking-pot are usually caught in the neighbourhood of Canton.

"Shanghai Birds" *Plate No. XIII*

Meadow Bunting
Pallas' Reed-Bunting
Rustic Bunting
Yellow-browed Bunting
Chestnut Bunting
Yellow-throated Bunting

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1017

MEADOW BUNTING (CHINESE)

Emberiza cioides castaneiceps

(See Plate No. XIII)

A sparrow-like little bird about 5½ inches long. The crown and nape are chestnut to rufous brown, with the usual darker streaks, breast ruddy brown shading to a light fawn on the abdomen. The chin and throat are grey and at close quarters you may distinguish a black moustache and white eye-brow. The usual white feathers may be seen under the tail.

This bird is a resident in the Yangtze Valley but does not, to my knowledge, nest in our neighbourhood. The male bird is a songster and may be heard here in the early spring.

NOTE :—La Touche has accepted the name of "Chinese meadow bunting" for this bird, while readers of Gee and Moffett's "Birds of the Lower Yangtze Valley" will find it described as "the chestnut bunting."

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1010

CHESTNUT BUNTING

Emberiza rutila

(See Plate No. XIII)

This bird is called by *Gee* and *Moffett* "the ruddy bunting," but I prefer the name given above.

The entire head, throat, upper breast, back and upper wings are a bright chestnut, which make the bird easily recognizable under either of its common names. The lower wings and tail are plain brown, and the underparts pale yellow.

There is a certain amount of "streaking" on the sides to suggest the usual bunting plumage, and this is more marked in the females which lack the bright rufous head-dress of the males.

Length about 5 inches.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1018

GREY-HEADED BUNTING (SIBERIAN)

Emberiza fucata fucata

This is also known as "the painted bunting" owing to its general appearance of being splashed all over with streaks of brown, rufous-brown and black. The head is grey with black streaks, the tail brown and black with white streaks showing more prominently in flight. Other distinguishing marks are a whitish throat, and a chestnut band across the breast which is otherwise buffish-white.

Length about 5½ inches.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1919

RUSTIC BUNTING

Emberiza rustica

(See Plate No. XIII)

This is another sparrow-like bunting, about 5½ inches long, with a grey-white breast flecked with chestnut streaks at the side. The throat is white occasionally flecked with chestnut, and divided from the breast with a band of spots of the same colour. The head is black streaked with buff, and you may notice a white eyebrow and white patch on the nape. The wings and tail are brown and black, the tail showing white streaks and prominent white under-feathers.

You may often see this bird in the winter on cultivated land, and possibly hear its song in the early spring.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1012

YELLOW-THROATED BUNTING

Emberiza elegans sibirica

(See Plate No. XIII)

I would describe this bird as being similar to the rustic bunting in its upper parts, that is to say, a black head streaked with buff, and the wings and tail chiefly black and brown.

The chief distinguishing marks are the bright yellow throat and eyebrow ; the throat is bordered with a narrow white band, then comes a black patch across the breast and below that, all is greyish-white flecked at the sides with brown.

This pretty little bird is slightly larger than most of our other buntings and I have measured several specimens about 6 inches long.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1025

PALLAS'S REED-BUNTING

Emberiza pallasi

(See Plate No. XIII)

This is a bird of the reeds and marshes and may be found here only in winter. The various specimens I have seen differ to a great extent and it would appear that the deep black head-dress of the summer is greatly changed when we see it in the winter. The females also differ in having streaky brown plumage in place of the black head and neck.

The underparts are grey to white with a black patch on the throat and upper breast. The wings and tail are black and brown with whitish edges and the tail has the usual white under-feathers.

Length about $5\frac{1}{4}$ inches.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1026

REED BUNTING (CHINESE)

Emberiza yessoensis continentalis

This bird is called by some authorities the "Japanese bunting," but as it is an accepted Chinese form of the Japanese reed-bunting, I prefer the common name given above.

It is about 5 inches long. In summer, with its black head, throat and upper breast, it is very similar in appearance to Pallas's reed-bunting described above, and the females show similar differences in plumage. The back of the neck is usually a pale chestnut.

The whitish underparts below the throat are much tinged with pale buff, and there are a number of brown streaks on the flanks. The wings have the usual streaked appearance, being black and brown with some grey edgings. The narrow tail is brown and black, and generally similar to that of Pallas's bird.

This is another winter visitor, so that you will only see it here with a brownish head and a distinct eyebrow about the same colour as the nape, *i.e.*, buff or pale chestnut.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1021

YELLOW-BROWED BUNTING

Emberiza chrysophrys

(See Plate No. XIII)

As its name would suggest the most prominent field-mark of this bunting is a bright yellow eye-brow.

It may be described in general terms as a rather large bunting (5½ to 6 inches) with black head streaked white, and brown upper parts; wings brown with some black tips and two white patches on the coverts. The breast and flanks are white, streaked with dark brown.

I have seen several specimens secured in Shanghai but consider it as a rare visitor or migrant only.

ORDER : PASSERES
FAMILY : *FRINGILLIDÆ*
SUB-FAMILY : *EMBERIZINÆ*
C. B. No. : 1029

LAPLAND BUNTING

Calcarius lapponicus coloratus

These buntings will only be seen as migrants in a severe winter. The head, throat and upper breast are black with a broad rufous stripe running across the back of the neck; this stripe varies in width, in some specimens amounting to a broad patch. There is also a white patch on each side of the throat, occasionally almost forming a collar. The rest of the visible plumage is either black or brown, relieved only with streaks of rufous or grey. The abdomen is white.

Length $5\frac{1}{2}$ to 6 inches.

FAMILY—**HIRUNDINIDÆ**—*THE SWALLOWS*

The swallows and martins live entirely upon insects which are caught on the wing and the whole of their anatomy is especially adapted for this purpose. The long narrow wings give them swift flight, the wide gape is a natural fly-trap and the legs are short and feeble as may be expected in a bird which feeds only in flight.

Our country-side is not suitable for the requirements of the martins and the only swallow common here is the one described below.

ORDER : PASSERES
FAMILY : *HIRUNDINIDÆ*
C. B. No. : 798

HOUSE SWALLOW (EASTERN)

Hirundo rustica gutturalis

Field identification.—Deep blue, with prominent white underparts ; deeply forked tail.

Description.—The length of this swallow is about 6½ inches. When seen in flight its general appearance is a deep steel-blue bird with white underparts and a deeply forked tail showing a border of white spots under the base when it is spread laterally. When examined more closely the bird will be found to have rufous or chestnut plumage on the chin and throat, below which there is a black band across the upper breast, broken at the centre by the rufous throat colouring. In some birds the rufous encroaches over the whole underparts but the white-bellied birds are by far the more common.

The swallows come to us late in March or early in April and remain with us until August or later. In common with all swallows, they have a very small bill and a wide gape in which insects are caught in the course of their swift and graceful flight. When at rest they sometimes make a feeble twittering attempt at song which can only be heard at close quarters. They also give a series of fairly loud squeaking calls when on the wing in search of flies.

Nesting habits, etc.—The favourite nesting-place of this swallow is under the eaves of a house, and, being an omen of good luck, they are much encouraged by the Chinese to build inside their houses which have open doors during the whole of the summer. The nest is made of pellets of mud bound together with straw, grass, etc., and lined with feathers.

Four to six eggs are laid, white, spotted and speckled with dark brown and different shades of purple.

Family—**MOTACILLIDÆ**—

THE WAGTAILS AND PIPITS

This family name covers both the wagtails and the pipits; the latter are not very common in Shanghai, while wagtails can be observed daily during the winter months in almost any field or garden, or anywhere in the vicinity of water; in fact wherever insects are to be captured there you may find a wagtail. The legs are long and slender, the wings are long and pointed and the long tail is continually being jerked up and down, as the common name of the bird would suggest. There are a dozen or more different wagtails to be found in the valley of the Yangtze but I only know of five which may be seen in Shanghai, and these may for convenience be divided into two groups. (1) Those with black and white underparts, the white-faced, the streak-eyed and the pied wagtails (2) Those with yellow underparts, the grey-headed and the Eastern Grey wagtails. It seems a pity that the birds of the second group do not bear a common name suggesting the yellow plumage, since either or both are so often spoken of as "yellow wagtails;" but it is useless to multiply common names and we must accept the undistinctive appelations already given to them. None of the wagtails stay with us for the breeding season.

Before describing these birds in detail, it may be remarked that the black and white wagtails are most difficult to identify and describe accurately owing to their many variations of plumage due to age, sex and season. It would merely weary the reader of a rudimentary book such as this to attempt to follow every change in the birds and I am therefore confining my remarks as far as possible to the adult birds as seen from late autumn to early spring in Shanghai. In Plate No. XIV the birds are all depicted in winter plumage, but as stated above, this is subject to much variation and grey areas of plumage must often be substituted for black, and *vice versa*.

"Shanghai Birds"

Plate No. XIV

Blakiston's Water-Pipit
Streak-eyed Wagtail
Grey-headed Wagtail
White-faced Wagtail
Pied Wagtail
Grey Wagtail

ORDER : PASSERES
FAMILY : *MOTACILLIDÆ*
C. B. No. : 484A

WHITE-FACED WAGTAIL

Motacilla lugubris leucopsis

(See Plate No. XIV)

Field identification.—Black, white and grey, with a white face.

Description.—Length about 7 inches. The face is entirely white with no eye-streak. The general colouring is black and white with grey on the upperparts of the younger birds. The adults have a black crown and back, and black crescent on the white breast and a black tail with white feathers below. The wings are dark brown to black with prominent white patches and edgings.

The whole of the underparts are white from throat to abdomen with the exception of the black crescent mentioned above and this spreads upwards as the bird gets older until it becomes a deep black apron from throat to breast.

ORDER : PASSERES
FAMILY : *MOTACILLIDÆ*
C. B. No. : 484c

STREAK-EYED WAGTAIL

Motacilla alba ocularis

(See Plate No. XIV)

Field identification.—Black eye-streak on the white face and white frontal band above the beak.

Description.—Length about 7½ inches. This bird is distinguished from the white-faced wagtail by its black eye-streak running across the white face through the eye. In winter plumage, the back is blue-gray and the crown black but having a broad white frontal band above the beak. Younger birds have the head grey.

The black crescent on the breast, increasing with age, and the general colouring of wings and tail, are the same as in the white-faced wagtail.

ORDER: PASSERES
FAMILY: *MOTACILLIDÆ*
C. B. No.: 484D

PIED WAGTAIL (EASTERN)

Motacilla lugubris lugens

(See Plate No. XIV)

Field identification.—Black back in winter (compare blue-gray back of streak-eyed wagtail).

Description.—Length 7¼ inches. This bird is very hard to distinguish from the streak-eyed wagtail since it has the usual black and white appearance and the same black eye-streak. It may however be distinguished in winter plumage when the adult male is generally black from crown to upper tail. (Compare streak-eyed bird with blue-gray back.) The lower back may be grey, *but the shoulders will always be black.*—In the females the black is usually mixed with grey and both sexes are apt to have a mottled appearance on the upper parts.

ORDER : PASSERES
FAMILY : *MOTACILLIDÆ*
C. B. No. : 481A

GREY-HEADED WAGTAIL

Budytes flavus borealis

or

Budytes flavus thunbergi

(See Plate No. XIV)

Field identification.—Grey head, back washed green. Underparts, brilliant yellow.

Description.—Length about 7 inches. The head is blue-grey to the nape, with sides of the head blacker. The back from nape to base of tail is greenish-olive. The tail coverts are brown, the central tail feathers brown to black, with the outer and lower feathors white. The wings are brown bordered with pale green and yellow. The underparts from throat to abdomen are brilliant yellow, greenish at the flanks.

The female in winter plumage is the same as the male.

ORDER : PASSERES
FAMILY : *MOTACILLIDÆ*
C. B. No. : 483

GREY WAGTAIL (EASTERN)

Motacilla cinerea melanope

(See Plate No. XIV)

Field identification.—Head and back grey, with pale yellow under parts.

Description.—Length about 7 inches. The upper parts from crown to base of tail are grey, shading into greenish-yellow of the tail coverts. There is a white eyebrow and a light grey patch just below the eye. The tail is brown with outer and lower feathers showing white. The throat and chin are white in winter, and the breast pale yellow, almost white at the flanks and more brilliant towards the abdomen.

This is the more common of the "yellow" wagtails and is easily distinguished from the bird previously described by the paler yellow of the underparts.

ORDER: PASSERES
FAMILY: *MOTACILLIDÆ*
C. B. No.: 479

BLAKISTON'S WATER PIPIT

Anthus spinoletta blakistoni

(See Plate No. XIV)

Field identification.—A drab bird, brown above and dull white below. Slender legs and general form much like a wagtail.

Description.—About 7 inches long. The upper parts are a drab brown more reddish towards the head, and slightly streaked with grey when seen at close quarters. The under parts are a dull white or pale grey streaked with brown, and there are a few darker streaks on the flanks. The wings and tail are a dusky brown with the outer and under feathers of the tail white.

The slender legs and toes and the general shape of this bird will make him easily recognized as a member of the wagtail family, and you may see him in the winter, generally in the vicinity of water.

ORDER : PASSERES
FAMILY : *MOTACILLIDÆ*
C. B. No. : 475

TREE PIPIT (EASTERN)

Anthus hodgsoni hodgsoni

Field identification.—Small brown pipit with breast streaked brown to black.

Description.—About 6 inches long. The upper parts are a dull olive-brown, streaked darker brown from head to back. The wings are brown with a white edging along the coverts ; the tail brown, lighter at the edges and tipped white, with white also showing on the under tail-feathers.

The underparts shade from pale buff at the throat to white on the abdomen, the breast being heavily marked with elongated black spots, longer and more like streaks on the flanks ; when we see these birds in winter the black breast spots are not so pronounced and more brown in colour.

ORDER : PASSERES
FAMILY : *MOTACILLIDÆ*
C. B. No. : 479A

WATER PIPIT (EASTERN)

Anthus spinoletta japonicus

Field identification.—Slightly larger than the tree pipit, and underparts from throat to abdomen pale fawn with dark brown streaks (winter plumage).

Description.—Length about $6\frac{1}{2}$ inches. Very much like the tree pipit described above. The upper parts brown with darker centres to the feathers. Wings brown with white edgings on the coverts ; tail brown with white outer feathers. The underparts are all pale fawn with dark brown streaks. These streaks are carried by all young birds and by the adults in winter only.

A winter visitor only to be seen in the vicinity of water.

Family—**ALAUDIDÆ**—*THE LARKS*

This is a very clearly defined family with the tarsus (lower leg) covered with *Scutes* or shield-shaped scales, and the hind claw very straight and long. The wings are pointed and the birds have a powerful flight, rising in a series of jerks. There are about ten species of larks in China, but we only see one fairly frequently, this being the skylark, which comes as a winter visitor.

ORDER : PASSERES
FAMILY : *ALAUDIDÆ*
C. B. No. : 470A

SKYLARK

Alauda arvensis intermedia

Field identification.—Brown to pale fawn. Breast and flanks much streaked with black or brown.

Description.—Length about 6½ inches. Apart from the many cage birds kept by Chinese for their singing powers, you will only see these birds in winter, when they may often be found feeding in large scattered flocks. The general appearance of the lark is too familiar to require illustration ; the upper parts are dark brown with a pale edging to each feather. The lower parts pale fawn to white with black and brown streaks. The wings and tail darker brown with lighter edges and the white of the outer-tail feathers showing distinctly in flight.

Unfortunately we do not get the benefit of the lark's magnificent song in winter, but when the birds are disturbed in their feeding, you may hear a few of their trilling song-notes used apparently as an alarm call. Some years ago some residents claimed to have heard a lark singing here in winter, but I have never had the good fortune to hear one in full song in Shanghai.

Larks appear to differ very considerably both as to colour and size and although I see this bird given in most books as about 7 to 7½ inches long, the specimens taken at Shanghai which I have measured have only been about 6½ inches long on the average.

The great singing qualities of the lark have made it the subject of much poetry and many high-sounding names, so that it is not surprising to learn that it is known in China as the " Messenger of Heaven." Larks feed on insects and seeds taken on the ground, but they have a bad habit of taking the sprouting stalks of young corn which makes them very unpopular among farmers.

Order PICI

This order shows very marked anatomical differences from the passerine birds, the whole construction being specially adapted for clinging to trees and pecking the wood. There are usually four toes, two in front and two behind, constructed for gripping the bark. The neck muscles are extremely strong and the beak is like a chisel for boring into wood. The young are blind and helpless when hatched and have no down.

Family—**PICIDÆ**—*THE WOODPECKERS*

The family name is *picidæ* and this is now divided into two subfamilies known as *picinæ* for the true woodpeckers and *jynginæ* for the wrynecks, the latter having a much softer tail than the woodpeckers. All woodpeckers build their nests in holes in trees which they generally hollow out for themselves.

ORDER : PICI
FAMILY : *PICIDÆ*
SUB-FAMILY : *PICINÆ*
C. B. No. : 438

PIED WOODPECKER (CHINESE)

OR

SPOTTED WOODPECKER (CHINESE)

Picus cabanisi

or

Dryobates cabanisi cabanisi

(See Plate No. XV)

Field identification.—Black and white bird with large head and long bill. Male has bright red on occiput and lower abdomen.

Description.—Length about 9½ inches. The upper parts are chiefly black, with white patches at either side of the neck. This gives the neck a peculiarly narrow appearance and makes the head appear disproportionately large. Wings black with white patches.

The *male* has a distinct scarlet patch on the back of the crown and also on the lower abdomen, but it is not often these can be seen clearly, as they are generally hidden when the bird is at work on a tree. The short strong tail is black with white feathers showing beneath, and this is used by the bird as a prop when clinging to a tree with its sharp claws (note also the action of the two hind toes in Plate No. XV). The white underparts are freely washed with brown, the extent of this brown washing varying considerably in different specimens.

"Shanghai Birds" *Plate No. XV*

Pied Woodpecker (male)
Pied Woodpecker (female)
Green Woodpecker
Wryneck

This bird has a very characteristic habit of " drumming " on a hollow branch when sounding it for grubs, and I believe this is done sometimes merely for amusement as I have watched a woodpecker giving this performance on a bamboo wireless aerial where there was no hope of food. The drumming or rattling sound is produced by beating an extremely rapid tattoo with the end of the bill, and if you follow this sound up you may often see the bird.

The flight of these woodpeckers is rapid and jerky and you will often hear their shrill cry uttered while on the wing. This is a very common resident and may be seen almost anywhere in Shanghai.

Nesting habits, etc.—The nesting place is a hole in a tree, usually hollowed out by the bird itself in decayed wood. Five or six white eggs are laid.

ORDER : PICI
FAMILY : *PICIDÆ*
SUB-FAMILY : *PICINÆ*
C. B. No. : 432c

GREEN WOODPECKER (YANGTZE)

Picus guerini

or

Picus canus geurini

(See Plate No. XV)

Field identification.—A dull green appearance. A black line down the nape and scarlet patch on forehead (male). A black line below ear coverts.

Description.—Length 10 to 11 inches. The exact colouring of this bird is difficult to illustrate and describe as the green washing overshadows the grey and brown feathers below it. The head is blue-grey with a black streak from base of beak running below the ear-coverts. The male has a scarlet patch on the forehead. The throat is more or less grey and the breast washed a lighter green. From back to tail the feathers are grey, freely washed with green. Wings brown with white patches at the edges, but washed with a yellowish green (the underwings, grey and white.)

This bird is a resident and fairly common in our neighbourhood. It has the usual woodpecker habits and gives a harsh shrill call which may be distinguished from that of the pied woodpecker by the fact that it has no element of " trill " in it, being just a plain screech which the bird gives both on the wing and when crawling round a tree.

Nesting habits, etc.—The five or six eggs are a very glossy white and are placed in a hole in a decaying tree.

ORDER : PICI
FAMILY : *PICIDÆ*
SUB-FAMILY : *PICINÆ*
C.B. No. : 445

SPARK-HEADED WOODPECKER

Yungipicus scintilliceps.

Field identification.—A very small woodpecker. Black upper parts with white lower back barred across black and white.

Description.—Length 7 inches. Upper parts black, barred black and white on the lower back. Wings black and white, much like the pied woodpecker. Front of head grey with red patches on the sides of the head (males only). Underparts grey with brown streaks or patches.

This little woodpecker is not nearly so common as the pied woodpecker, but may be distinguished immediately by its smaller size.

Nesting habits, etc.—Nests in a hole in a tree, and lays white eggs like the other woodpeckers.

ORDER : PICI
FAMILY : *PICIDÆ*
SUB-FAMILY : *JYNGINÆ*
C.B. No. : 460

WRYNECK

Jynx torquilla japonica

(See Plate No. XV.)

Field identification.—General colouring brown to buff, black band from crown of head to back, and a chequered and barred appearance on flanks and tail.

Description.—About 6½ inches long. This is another difficult bird to describe for identification and even the illustration on Plate No. XV may not be helpful, as the bird is not easy to approach at close quarters where the intricate markings can be seen. The ground colouring of the upper parts is grey, with brown and black lines and spots. A distinct black line runs from the back of the crown and through the back. The tail is rather broad and spade shaped, and is barred unevenly with black. The underparts are a dirty white to buff, much barred and marked with brown lines and arrow-heads.

This bird comes to us in April which fits in with its popular name in England, " cuckoo's mate," so-called because it comes just before the cuckoo. The birds soon leave our neighbourhood and apparently only pass us in course of migration. The distinctive call is a long-drawn melancholy " peep-peep-peep " more mournful in tone than that of the woodpecker and so loud you would think the bird anxious to advertise its presence. It feeds both on trees and on the ground where there are ants, etc., drawing in the insects on its long tongue. When climbing round trees it has the habit of holding its head on one side, as if listening, from which it obtains the name of wryneck.

It should be remembered that the wryneck is not a true woodpecker, since it does not peck wood to obtain its food, nor does it use its soft tail as a support. It has, however, all the other woodpecker habits and appearance when clinging to tree-bole or branch.

Nesting habits, etc.—There is no evidence that the wryneck ever nests here. It lays up to nine glossy white eggs in any convenient hole in a tree, and will continue to lay more if the eggs are taken away.

Order **HALCYONES**

An order of mainly tropical birds, with short legs and peculiar formation of the toes, very large head and long bill. All these birds nest in tunnels and lay roundish white eggs. As is usual with most birds which nest in holes, the young are hatched without any down.

Family—**ALCEDINIDÆ**—*THE KINGFISHERS*

The chief characteristics of the kingfisher are those of the order halcyones (*see* above). The legs and feet are weak and the second and third toes are united at the base, while the third is united to the fourth toe for more than half its length. There are said to be four or more kingfishers to be seen in the Yangtze Valley but in several years of observation in the Shanghai neighbourhood I have only seen one, the Little Blue Kingfisher, described below.

ORDER : HALCYONES
FAMILY : *ALCEDINIDÆ*
C.B. No. : 375

LITTLE BLUE KINGFISHER

Alcedo ispida bengalensis

(See Plate No. XVI)

Field identification.—Greenish-blue back, ruddy-buff breast ; large head and long bill.

Description.—About 6½ inches long. It seems an impossible task to describe in detail this beautiful little bird which may be seen flitting down any creek or across any pond in the Shanghai country. The distinguishing features are the large head with crown and nape banded black and blue, the bill long and pointed for the swift catching of fish. The throat is white and the breast and abdomen ruddy buff. Most distinctive of all is the brilliant patch of scintilating greenish-blue formed by the feathers of the back and upper wings. The rest of the wings are deeper green-blue to black and the short stumpy tail is deep blue above and black below.

These brilliant little birds have a habit of following any convenient watercourse in their flight and are not so often seen in the open country, but in the spring time during the mating season they are much bolder and may be seen almost anywhere in pursuit of friend or foe giving their thin shrill call of "p-e-e-e-t," a sound which may often disclose their presence.

When hunting for food, the kingfisher sits patiently on a stump or branch immediately over the water, waiting for a fish to pass. He darts on his quarry with a swift swooping flight and snatches the fish out of the water without immersing himself. I have, however, been told by Mr. Sowerby that on one occasion a kingfisher came to a small aquarium placed at his open window and *dived into* the water to capture a fish, thus proving that the birds will immerse themselves on occasion ; the late Mr. George Lanning's observations also bear out this theory, but I must confess that all the birds I have observed have caught their fish without immersing their bodies.

LITTLE BLUE KINGFISHER

Nesting habits, etc.—The nest is burrowed rather than built, being a deep hole in a bank, usually the bank of a creek or pond. I have seen a pair of kingfishers commencing this operation by alternately charging the bank of a small pond with their beaks and so scooping the mud out. In other cases an existing hole, such as an old rat's burrow, will be used and the eggs laid in an enlarged chamber at the end of the burrow. Eggs are usually found resting on fish-bones, and these are probably not intended as nesting material, but are merely what the birds have thrown up after digesting their food (the fish being swallowed whole.) There are six or seven pure white eggs, more round than oval in shape.

Order UPUPAE

The anatomical peculiarities include a long slightly curved bill, tarsus with shield-like scales back and front like the lark's, and third and fourth toes joined at the base. This order is confined to the old world only and is very restricted in its numbers.

Family—**UPUPIDÆ**—*THE HOOPOES*

With the exception of a sub-family in tropical Africa, there is only one family and only one kind of hoopoe. This bird is both peculiar and distinctive, and it would appear to be impossible to group it with any other known birds.

ORDER : UPUPÆ
FAMILY : *UPUPIDÆ*
C. B. No. : 389

HOOPOE (EASTERN)

Upupa epops saturata.

Field identification.—A buff coloured bird with a long bill and a large crest which opens and shuts like a fan. Wings brown, black and white, in heavy bars.

Description.—Length about 11 inches. The general colour of the body, excepting the wings and tail, is a rich rufous buff. The wings are brown and buff with black and white bars. The tail black with a white to buff bar across it near the centre. The bill is long, slender and curved, and the most prominent feature of all is a handsome erectile crest rufous fawn with black and white tips. This crest, higher at back than at front, opens forwards and shuts backwards like a fan.

I hesitated to include this striking bird in my list, having only seen it at sea close to Shanghai in course of migration, but I am assured it frequently occurs and may be seen feeding on the ground in this neighbourhood between the months of December and April. It travels through the air swiftly with a tremendous, if fluttering wing-beat and walks gracefully when in search of grubs, etc. Its call is a peculiarly mellow "oo-poo" from which it presumably takes its name.

Nesting habits, etc.—This bird breeds in Northern China, Siberia, Mongolia, etc., and generally makes a very rough nest in any convenient hole. It is strange that such a beautiful bird should have such dirty nesting habits, but it must be confessed that the nest is usually filthy and evil-smelling. In certain parts of China the hoopoe is known as the "coffin-bird" as many nests have been found in holes in coffins lying exposed to the elements in accordance with the custom of the country. There are five to seven eggs, greenish-blue when laid, but generally stained to a dirty yellow owing to the filthy habits of the parent birds.

Order CAPRIMULGI

This is another specialized order covering the nightjars or goatsuckers. They are typical fly-hawkers and have the small bill and wide gape peculiar to their trade. The eye is very large and especially developed for working in the dark. There are long bristles round the gape as in most catchers of flies.

Family—CAPRIMULGIDÆ—*THE NIGHTJARS*

All these birds have soft mottled plumage and the physical peculiarities mentioned in describing the order. They lay only two eggs on the open ground and the young are hatched quite helpless though covered with down. There are many kinds of these tropical birds but only one is found here.

ORDER : CAPRIMULGI
FAMILY : *CAPRIMULGIDÆ*
C.B. No. : 412A

JAPANESE NIGHTJAR

OR

GOATSUCKER

Caprimulgus jotaka

Field identification.—Ashy brown and black colouring, mottled and lined. Flat head, tiny beak and wide gape.

Description.—About 10 inches long. This nightjar only passes us in migration during the late spring and autumn, but a short description is worth giving owing to the many peculiarities of the bird. You will seldom see it in the daytime, but your curiosity as to its identity may be aroused if you happen to notice its silent flickering flight in the failing light of a spring or autumn evening. The wings are long, curved and pointed at the tips. The plumage is dark grey, brown and black, mottled and marked with fine wavy lines, but the general appearance in flight is a dull ashy grey or black. The swift and silent flight is almost comparable to that of the swallow. The bird has a curiously flat-looking head and an immense gape, extending right across the face and terminating in a tiny useless beak ; this is, in fact, the capacious trap in which the nightjar catches insects while on the wing.

The feet are small and weak, so that the bird squats when at rest, instead of standing, and its habit is to perch (or sit) *along* instead of *across* any branch or other resting place.

The name of goatsucker was apparently applied because of the bird's habit of hovering round flocks of goats, which habit, in conjunction with the wide mouth and short beak, led to the belief that the birds sucked the goat's milk. This is, however, in the nature of a libel as the birds feed on insects only and merely follow the goats for the various insects they attract. Another peculiarity of this bird is the curious knocking or rattling noise which it makes in its nocturnal flights, from which it probably acquired the name of nightjar. There is nothing beautiful about this bird except its graceful flight, but it is undoubtedly interesting owing to its strange appearance and habits.

Nesting habits, etc.—Does not breed here. Makes no nest but lays two eggs on the bare ground, dull white, blotched with brown.

Order CUCULI

Of the anatomical peculiarities of this order the most remarkable is the reversible outer toe which can be placed at right-angles with either front toe. The young are hatched blind and naked. We are only interested in one family which is described below.

Family—**CUCULIDÆ**—*THE CUCKOOS*

There are said to be several kinds of cuckoo in China, but I only know of two in this neighbourhood of which one, the Indian cuckoo, is by far the more common. These birds have two toes in front and two behind (subject to the peculiarity mentioned in describing the order) and the feet are small and weak. They generally have the habit of laying their eggs in other birds' nests and this applies without exception to the two local kinds of cuckoo.

The bill of the cuckoo is curved downwards giving it a rather hawk-like appearance and partly accounting for an old belief that cuckoos changed into hawks during the winter.

ORDER : CUCULI
FAMILY : *CUCULIDÆ*
C.B. No. : 355

INDIAN CUCKOO

Cuculus micropterus.

(See Plate No. XVII)

Field identification.—A grey-brown bird, with white abdomen barred black, the bars heavier and farther apart than those of common cuckoo.

Description.—Length 12 to 12½ inches. Upper parts dull brown with a greyish head. The throat and upper breast are pale grey, shading to white on the lower breast and abdomen, the latter crossed with heavy dark bands set well apart and therefore more conspicuous than those of the common cuckoo. The upper surface of the wings in brown, the tail is brown with a black band near the tip. The beak is strong and slightly curved giving the bird a hawk-like appearance.

These birds are very common summer visitors, coming to us in May, usually during the first week, and leaving not later than September ; their arrival is quickly heralded by the resonant cry of the males, usually described as " kwei-kwei-kwo-kwo " though many of the local Chinese prefer to call it " sau-sau-mei-ho." This cry is given many quaint meanings of which the most common are " quick, quick plant rice " or " quick, quick reap wheat." The cry is uttered sometimes from a perch in a tree but more often when on the wing and it can then be heard over a great area if the bird is flying high. It is also to be noted that the cry is often heard during the night.

Plate No. XVII

Indian Cuckoo
Common Cuckoo

Nesting habits, etc.—In common with most kinds of cuckoos, though not with all, these birds place their eggs in the nests of other birds, leaving them to an innocent foster-mother to rear at the expense of her own brood. It seems now to be clearly established that the cuckoo actually lays its egg in the selected nest, but I am not quite so certain if at the same time it removes one of the eggs already there. Though there may be some doubt on that point the rest of the process seems to be amply proved by sets of photographs which may be seen in the British Museum. The young cuckoo has a large hollow in his back which seems to have been provided by nature for the very purpose. It matters not to him if he be the first hatched, and so has only eggs to deal with, or if he be hatched later than others and has both eggs and chicks to remove. During the first days of his existence, *while he is still blind*, the young cuckoo works himself beneath both eggs and chicks, and balancing them in the hollow of his back, heaves them over the side of the nest to perish on the ground. The young cuckoo is then left alone to take all the nourishment which the foster-parents can provide and, since they are usually smaller birds, it takes all their efforts to feed the gluttonous changeling.

The eggs of the cuckoo seem to differ considerably and it must be something more than coincidence that the egg usually has a pronounced similarity to the eggs of the victimised foster-parent, even though the size be greater or smaller. The general appearance of a cuckoo's egg is a pinkish-white, with variable spots and specks of deep red generally placed thickly round the larger end. The number of eggs laid must be a matter of surmise, since only one is laid in each nest, but as the race remains plentiful, though there are fewer females than males, it is thought that one female will lay as many as 20 eggs in different nests. In the absence of local records it is impossible to name the bird most imposed upon, but it is safe to say from experience in England that the nests of small birds such as warblers are usually chosen—I have even heard of a cuckoo's egg been found in China in the tiny nest of the small fan-tail warbler.

ORDER : CUCULI
FAMILY : *CUCULIDÆ*
C.B. No. : 352

COMMON CUCKOO

Cuculus canorus telephonus

(See Plate No. XVII)

Field identification.—Upper parts chiefly blue grey. Bars across abdomen narrow and close.

Description.—Length about 13 inches and hence slightly larger than our more common Indian cuckoo. I have seldom seen or heard this bird around Shanghai, but have just received an account of one bird which remained for a week (early June) in the Hungjao district. Plate No. XVII is intended to show the main differences between this bird and the Indian cuckoo. The head is ashy-grey and the rest of the upper parts blue-grey. Throat and upper breast ash-grey, abdomen, etc., white with narrow bars set closer than those of the Indian cuckoo.

The familiar cry of this bird, the common cuckoo of England, is aptly described by its name and it is only late in the summer that it will "change tune" and cry "cuck-cuck-koo." The main history of this bird as a summer visitor to England is tersely put in the following doggerel which has been handed down by word of mouth through many generations of countrymen :—

April—come he will
May—sings all day
June—changes tune
July—prepares to fly
August—go he must.

This cuckoo is also rather hawk-like in its appearance and its general pugnacity earned for it among our ancestors the name of being " the only bird to prey upon its own kind." The bird does not prey upon its own kind but the males are continually indulging in running fights, mostly in the air, when feathers fly freely. This is due to the fact that the females are far fewer in number than the males, and one female will consort with many males, thus being the subject of continual struggles.

Nesting habits, etc.—The habit of using the nests of other birds in which to deposit eggs is the same as that of the Indian cuckoo and has been fully described above.

The eggs have a greenish background and the brown and/or purple spotting varies considerably and seems to be adapted to the species of the bird victimised : or more probably, the bird chosen as a victim is selected to fit in with the type of egg laid by any particular cuckoo.

Order STRIGES

This order was at one time united with the order Accipitres (the eagles, falcons, etc.), and they have many anatomical features in common with them, such as the curved bill and strong feet and legs suitable for seizing their prey. They are now, however, accepted as being a separate group whose most obvious distinctions include the large eyes, looking straight forward and surrounded by a disc of feathers laid flat to the face. The head is exceptionally thick and the ears large and strongly developed. It must be remembered that owls are nocturnal birds and the noiseless flight and large eyes are particularly adapted to nocturnal life just as are those of the nightjars. All owls lay white eggs without any markings.

Family—**STRIGIDÆ**—*THE OWLS*

This is the only recognized family covering all the owls though some authorities divide them further into two sub-families. There are possibly ten different owls to be seen in the Yangtze Valley, of which I have noted the eagle owl, the hawk-owl, long-eared owl, short-eared owl, collared owlet and whiteley's owlet reported in Kiangsu Province. I feel, however, that these are night-birds of which we see little or nothing, and I am therefore only describing the common owlet which we may often see in the very early hours in residential districts of Shanghai.

Owls are true birds of prey and feed largely on small mammals which they seize in their strong claws.

ORDER : STRIGES
FAMILY : *STRIGIDÆ*
C. B. No. : 405A

WHITELEY'S OWLET

OR

BARRED OWLET

Glaucidium cuculoides whiteleyi

(See Plate No. XVIII)

Field identification.—Small brown owl, barred and streaked fawn. Tail barred white, abdomen streaked brown and white.

Description.—About 10½ inches long. You may sometimes see this little owl in the early mornings when his colouring can be distinguished, as he apparently has the habit of staying out later than other owls.

The plumage is chiefly brown, barred and streaked with white to fawn. The brown breast is barred across with lighter colouring while the abdomen is streaked (up and down) brown and white. The dark brown tail is barred across with distinct white stripes, each bar being broken at the shaft of the feather.

Nesting habits, etc.—The nest is usually made in a convenient hole in a tree, but the birds will often use the abandoned nest of any fairly large bird such as a magpie. The eggs are pure white and more round than oval in shape. The young are fed chiefly on small frogs which the parent birds seize in their claws and I have no doubt that the feeding of a hungry family is what accounts for these little owls being fairly often seen out in the early morning.

"Shanghai Birds"

Plate No. XVIII

WHITELEY'S OWLET

Order ACCIPITRES

This order contains all the birds of prey which hunt by daylight as opposed to the owls of nocturnal habit. Their main distinctions are the sharp curved bill, and strong feet and claws suitable for the seizing of prey, and only found otherwise in the order "striges" (the owls). All these birds have the cere, which is a patch of bare skin at the base of the beak in which the nostrils are situated. The *accipitres* are divided into two families, the *falconidæ* and the *aquilidæ*, both of which are represented here.

Family—FALCONIDÆ—*THE FALCONS*

These are large birds of prey of diurnal habit with a short though very powerful hooked bill and well-developed cere. None of them are residents here and I am very doubtful as to which of them is most often seen as a wanderer or migrant. I am here describing the eastern form of the ordinary peregrine falcon which may be taken as most representative of the group.

ORDER : ACCIPITRES
FAMILY : *FALCONIDÆ*
C. B. No. : 99

PEREGRINE FALCON

Falco peregrinus

(See Plate No. XIX)

Field identification.—White breast with black streaks and spots. Bars across flanks.

Description.—The male bird is about 15 and the female about 17 inches long. Upper parts grey with darker colouring on each feather. The lower parts are white from throat to abdomen with a variable number of streaks and spots in dark brown and black from breast to abdomen. The flanks are barred with black and the head and cheeks are black. The bill is short and hooked.

This bird may be seen occasionally in our neighbourhood, probably in course of local wanderings or migration. It is the natural enemy of little warblers and other birds that build nests protected only by reeds or grass. I have once seen a falcon attack young chickens and presume they prey upon game birds in their breeding season.

Nesting habits, etc.—Falcons do not breed in our neighbourhood, but it may be noted that they lay their eggs in a hollow on the ground (generally on a steep cliff or other inaccessible site). There are from two to five eggs, but usually not more than four, yellowish-white with dark reddish-brown mottlings and markings including bold spots.

FAMILY—**AQUILIDÆ**—*THE EAGLES, BUZZARDS, HARRIERS, KITES AND HAWKS*

The differences between this family and that of the falcons are based upon anatomical distinctions which do not concern us here. Out of this large family I have chosen five different members which are often placed in different sub-families but which may, according to the latest authorities, all be grouped together, under the above name.

ORDER : ACCIPITRES
FAMILY : *AQUILIDÆ*
C. B. No. : 137

BLACKED-EARED KITE

Milvus melanotis

(See Plate No. XIX)

Field identification.—Large brown hovering bird with an almost round patch of white in centre of under-wings.

Description.—About 26 inches long but with a much wider wing-spread. This is one of our most familiar birds both on the river and in the country or wherever offal and scraps of any kind are to be found. The plumage is chiefly brown with black streaks. The tail is distinctly forked and barred with brown. The plumage of the head and neck is lighter in the ground colour but heavily splashed with black at the centre of each feather ; there is also black at the ear-coverts, from which the bird takes its name.

The birds hover gracefully, and often very high in the sky when their only distinctive mark is the round patch of white on the centre of the underwing.

They may be noticed gliding for minutes together without any sign of a wing-stroke, from which habit the Kite took its old name in England of " glead " or " gled " (meaning glide).

Nesting habits, etc.—These birds are residents and build large nests of sticks usually in a high tree. There is a lining of grasses, etc., in which from one to three eggs are laid, greenish-white more or less heavily marked with different shades of brown.

"Shanghai Birds" *Plate No. XIX*

Peregrine Falcon

Black-eared Kite

Sparrow-Hawk

ORDER : ACCIPITRES
FAMILY : *AQUILIDÆ*
C. B. No. : 121

WHITE-HEADED BUZZARD

Buteo ferox hemilasius

Field identification.—Whitish head and white tail-feathers, otherwise very like the black-eared kite.

Description.—A bird similar in size to the black-eared kite, with plumage generally light brown. The head is almost entirely white or white to pale fawn, and there are a varying number of white feathers in the tail. The wings are also lighter in colour than the body, being unevenly splashed with fawn and white feathers.

This bird may be seen in the neighbourhood of Shanghai during the winter months, say, November to January.

Note.—To distinguish the buzzard from the kite when in flight, note that the buzzard's tail is rounded while the kite's is forked.

ORDER : ACCIPITRES
FAMILY : *AQUILIDÆ*
C. B. No. : 132

SPARROW-HAWK

Accipiter nisus nisosimilis

(See Plate No. XIX)

Field identification.—Small grey-brown hawk with somewhat rounded wings set well forward.

Description.—Male about 12 inches long. *Female* some two or three inches longer.

This is a North Asian variety of the familiar sparrow-hawk of Europe, that small but very deadly hunter of all small birds. He generally flies low and his hunting methods are stealthy and rapid. The European bird is dark bluish-grey above with reddish-white underparts barred dark brown. The tail grey barred almost black. The wings brown to grey. The *female* is more brown as to the upper parts and bigger than the male. She is also bolder and "more deadly" than the male, as often appears to be the case with predatory birds. Our eastern variety answers generally to this description but is somewhat paler than the European bird.

You may usually recognize this hawk by his slim, graceful body, with wings set well forward and apparently close to the head.

The sparrow-hawk is usually only seen here in the winter months and does not breed in our neighbourhood. As in the case of most of the birds of prey, its cry is a screaming "mew" but this very stealthy hunter may generally be described as a silent visitor.

ORDER : ACCIPITRES
FAMILY : *AQUILIDÆ*
C. B. No. : 131

GOSHAWK

Accipiter gentilis schvedowi

Field identification.—Dusky grey upper parts. Breast closely barred dark grey.

Description.—Length of *male,* 20 inches. *Female,* 23 inches. This is another bird of prey which may be seen during the winter months and possibly as late as the beginning of April. In general appearance like the peregrine falcon, it is somewhat larger, the upper parts a uniform dusky grey, and the pale breast, etc., closely barred grey. Seen at a distance the general effect is that of a dull grey falcon. The legs are yellow and the bill horn-coloured. The goshawk has here been likened to the peregrine falcon because of its size, but it may convey my meaning better if I describe it as *like a very large sparrow-hawk* and usually to be found in wooded areas.

ORDER : ACCIPITRES
FAMILY : *AQUILIDÆ*
C. B. No. : 128

HEN HARRIER

Circus cyaneus cyaneus

Field identification.—Male, light blue-grey with white breast. *Female,* brown with darker speckles and some white in region of the head.

Description.—The male is about 18 inches and the *female* about 20 inches long, with plumage differing considerably :

Male, Upper parts blue-grey terminating in a white-tipped tail with central feathers grey. Throat and upper breast grey shading into white of lower breast and abdomen, under tail feathers barred dark grey. *Female,* Generally brown in colour with dark centres to feathers, giving a mottled appearance. Breast and underparts buff to creamy-buff, streaked with dark or grey-brown. There are a number of white feathers on the head, forming a not very prominent ruff.

These birds are winter visitors only and not very common around Shanghai. They are wonderful hunters, working their ground in a systematic manner, with low and measured flight. They usually feed upon small mammals and reptiles, but like many of their kind, will tackle large birds or any other game, when hungry.

Order COLUMBAE

A very wide order of birds, represented all over the world and containing many forms from the now extinct dodo to the well known pigeons and doves of modern days. One familiar peculiarity is a cover of soft skin at the basal end of the beak in which the nostrils are situated. The crop is highly developed and the young are generally fed by regurgitation, from which habit we get the expression "pigeon's-milk."

All pigeons and doves are very poor nest-builders and either use cavities or hollows, or more commonly build a very light structure of sticks in trees, etc. The eggs are generally white and only one or two are laid in a clutch.

Family—COLUMBIDÆ—

THE PIGEONS AND DOVES

This is the family covering all the birds known to us of the order *columbæ*. Everything connected with pigeons and doves seems to suggest that they represent a higher form of "civilization" among birds. They live freely among men and have become one of his domestic pets. The dodo, greatest of all the pigeons, even forget how to fly and thus swiftly became extinct when the march of civilization overtook him in his native haunts in the island of Mauritius.

ORDER : COLUMBÆ
FAMILY : *COLUMBIDÆ*
C. B. No. : 339

SPOTTED-NECKED DOVE (CHINESE)

OR

COMMON DOVE (CHINESE)

Spilopelia chinensis

or

Turtur sinensis.

(See Plate No. XX)

Field identification.—A fairly wide demi-collar of black, each feather tipped white. Tail fanned out in flight showing black feathers tipped with white.

Description.—About 12½ inches long. This is the common dove of the fields and gardens in Shanghai. The upper parts are a fusty brown with the head and neck washed rose and the crown grey-blue. The most distinctive feature is a fairly-wide demi-collar of black and white running right across the back of the neck and narrowing as it approaches the sides, where it stops entirely, leaving the under part of the neck rose-coloured. The tip of each feather on this collar is white, and more square than round, so that the effect is that of white squares on a black ground. The underparts are grey freely washed with rose from throat to lower breast. The wings and tail are dull brown, the latter having black feathers below heavily tipped with white. In flight, this tail is generally fully spread giving the effect of a black fan with a broad white border.

"Shanghai Birds" *Plate No. XX*

Spotted-necked (or Common) Dove
Oriental Turtle Dove
Red Turtle Dove (*Male and Female*)

The flight is fairly rapid though not often long-sustained and the birds have a curious habit of flying almost vertically into the air and then sailing rapidly down to their objective. *Young birds* have their first plumage a pale fawn, without any collar, though the neck has a slightly speckled appearance. The upper tail feathers are clear brown.

Nesting habits, etc.—The doves are the very laziest of nest-builders and will place a loose platform composed of a few sticks either on a convenient ledge or across a fork in a thick tree or shrub. On this frail shelter they lay two white eggs.

Many nests may be found around Shanghai but their frailty and unfinished appearance will cause them to be passed by without being noticed.

ORDER : COLUMBÆ
FAMILY : *COLUMBIDÆ*
C. B. No. : 338

ORIENTAL TURTLE DOVE

Streptopelia orientalis

or

Turtur orientalis.

(See Plate No. XX)

Field identification.—A demi-collar (meeting neither back nor front) of black feathers bordered pale blue-grey. The mottled effect is formed of " semi-circles " instead of " squares " as in the case of the common dove.

Description.—About 12½ inches long. The head and neck are pale grey washed with rose, the crown has a blue-grey wash varying in depth of colour. From back to tail the bird is blue-grey, with the under tail feathers black tipped with pale grey. The wings are dark brown with upper feathers black, bordered rufous-brown, and some lower feathers of blue grey. The demi-collar meeting neither at the back nor front of the neck, is a little narrower than that of the common dove, and the mottling effect of black and pale blue-grey is formed of semi-circles, that is to say, each black feather of the collar has a rounded end bordered with pale blue-grey. *Male* and *female* are alike but *young birds* are much paler and have no " demi-collar " until after the first winter.

These birds do not frequent our gardens as the common doves do, but are frequently to be seen in the surrounding country.

Nesting habits, etc.—The usual careless nest of the dove, made of a few sticks balanced across the fork of a thick tree, usually between 10 and 20 feet from the ground. It is generally possible to see the two white eggs through the bottom of the nest.

NOTE :—This bird is sometimes known locally as the blue pigeon, but I do not consider this name to be correct.

ORDER : COLUMBÆ
FAMILY : *COLUMBIDÆ*
C. B. No. : 341

RED TURTLE DOVE

Onopopelia humilis

or

Streptopelia tranquebarica humilis

(See Plate No. XX)

Field identification.—A pale coloured little dove. Narrow demi-collar of black meeting across the back of the neck.

Description.—Length 9 to 10 inches. The head is a bluish-grey paler on the forehead. Upper parts chiefly blue grey, with rest of plumage vinous red, the wings being darker than the breast and practically brown at the extremities. Tail brown with lower feathers black tipped white.

The narrow demi-collar is all black and meets across the back; when examined closely there is a narrow grey edging to the collar.

The female is a plainer looking bird, paler as to the grey colouring and with pale brown substituted for vinous red.

This is our smallest and most handsome dove, not often seen in the immediate vicinity of our houses but often to be met with in the country during the summer months.

Nesting habits, etc.—See remarks as to other doves' nests. The two eggs are a pale cream colour.

Order GALLINAE

This is an order of four-toed land-birds with certain anatomical peculiarities of which we need only note a short and stout bill, with the upper part slightly arched, and overhanging the lower mandible.

The order covers what are generally known as " game birds " from the large capercaillie to the small quail.

Family—**PHASIANIDÆ**—*THE PHEASANTS, PARTRIDGES AND QUAILS*

This family is larger than the scientific name would suggest since it includes the pheasants, partridges and quails. (The only other families of the order *gallinæ* are the *tetraonidæ*, embracing the capercaillie, the grouse and the ptarmigan which are not represented here, and the *turnicidæ* which are dealt with later under the heading " quails.")

The *phasianidæ* are found almost everywhere and are the familiar " game-birds " of land habit. They are not feathered as to the nostrils (base of beak) legs and toes, and the male birds often have spurs.

I can only include here one pheasant and one quail belonging to this family as I do not find any partridge common here.

ORDER : GALLINÆ
FAMILY : *PHASIANIDÆ*
C. B. No. : 194[H]

RING-NECKED PHEASANT (CHINESE)

Phasianus torquatus.

Field identification.—*Male* has an irridescent purplish-green neck with a pure white collar, the long pointed tail feathers, buff with black bars. *Female* a much smaller bird lacking the green neck and white collar, with whole plumage mottled black, grey and chestnut.

Description.—Any attempt on my part to describe a pheasant would appear to me as vain as,

" To gild refined gold, to paint the lily
To throw a perfume on the violet ....."

I find I am not alone in this form of cowardice, as at least one English writer on birds gets over the difficulty by referring his readers to the nearest poulterer's shop. The brilliant purplish-green neck with pure white collar, the bronze-green nape and crown, the mixed plumage of chestnut, rufous, blue and buff with purple and black mottling and lining, are all part of the indescribable plumage of the *male*. The red region round the eyes is much less noticeable in the *female* which is a smaller and plainer bird, lacking very long tail feathers, and dressed in more sober hues of grey, chestnut and black.

It is even difficult to give exact measurements for the pheasant since the birds differ so much both as to size of body and length of tail, but we may say that a *male* will have a " beak to tail measurement " of 16 inches, with tail extensions of 16 inches, making the total length nearly three feet. The total length of the female will perhaps be 22 inches.

The Chinese ring-necked pheasant was introduced into England in the 18th century and has since freely interbred with the old English pheasant and many other forms since introduced. The result is that England to-day has a vast number of hybrids, the exact origin of which it is daily becoming more difficult to trace.

Nesting habits, etc.—The pheasant lays its eggs on the ground, the nest being little more than a hiding place in the long grass, with a pad of grasses flattened into shape by the sitting bird. The bird effaces itself so completely beneath the arching tops of the long grass that it remains invisible until flushed by being almost trodden upon. There are anything from seven to 12 eggs in a clutch, plain yellowish-olive in colour. Breeding begins early in our neighbourhood and I recently flushed a hen with her brood just able to fly in the first week in May.

Quails (Family: *PHASIANIDÆ AND TURNICIDÆ*)

The quails fall into two family groups, the common quail being a member of the *Phasianidæ* (previously described) and the button quail a member of the family *Turnicidæ* which are sometimes called the bustard quails. These latter are slightly smaller than the other quails and have only three toes, the hind toe being entirely missing. In general form quails are like a small partridge and seem to have limited powers of flight, generally preferring to keep to the ground and only flying a short distance when flushed.

There seems to be some doubt as to whether the common quail of Europe (*Coturnix coturnix*) is found in our neighbourhood or whether all our common quails belong to the sub-species known as *Coturnix japonica* or Japanese quail. I incline to the theory that the latter is the case and have therefore described our local quail as " common quail (Japanese) ".

There is a great deal of historical interest attaching to the quails, since the immense numbers in which they are known to migrate caused them to figure in Bible history, thus constituting one of the earliest records of the phenomenon of migration. For example, we find (in Exodus, XVI) that when the Israelites were wandering in Sinai and " murmuring for want of bread " that " at even the quails came up and covered the camp " (verse 13). Again (in Numbers XI, 31 and 32) we find " There went forth a wind from the Lord and brought quails from the sea.....as it were two cubits high on the face of the earth.....and the people stood up and gathered the quails, etc.,.....". On this occasion, it has been calculated, the people must have gathered something like 9,000,000 quails ! This story is borne out in more modern times by statements that the Bishop of Capri made an income of about £1,000 per annum by gathering at least 160,000 quails annually at the time of migration on a small island in the Bay of Naples, and similar stories are told of other parts of Europe where tired quails in course of migration are killed in immense numbers or fall into the sea to become food for sharks.

ORDER : GALLINÆ
FAMILY : *PHASIANIDÆ*
C. B. No. : 169

COMMON QUAIL (JAPANESE)

Coturnix japonica.

Field identification.—Like a small partridge. Barred and striped, black brown and yellowish.

Description.—About 7½ inches long. The bird has a squat form like a small partridge and is generally flushed almost from under your feet. The upper parts are mainly a chestnut-brown to black with many bars and stripes of lighter brown and yellowish. The crown is darker brown with a lighter stripe running through it. The cheeks and throat are a pale chocolate in the male, but in the female these parts are much lighter, say, pale buff. The breast and underparts are mainly chestnut with darker bands and spots, the female being more heavily spotted than the male, while the whole plumage of the underparts becomes paler towards the abdomen.

The birds may be seen here generally in spring and autumn. The cry of the male bird is described as consisting of the syllables " wet-mi-lips " uttered in a liquid tone while the female's answering cry is like the " piou-piou " of the baby chicken.

Nesting habits, etc.—The quail's nest is merely a hollow in the ground (sometimes slightly lined with grass, etc.), in which are laid eight or many more creamy-white eggs with dark brown blotches and spots.

ORDER: GALLINÆ
FAMILY: *TURNICIDÆ*
C. B. No.: 152

BUTTON QUAIL

Turnix blanfordi

Field identification.—Like the common quail but smaller and darker.

Description.—Not more than 7 inches long and therefore smaller than the common quail. This is a summer visitor and in general appearance and habits very similar to the common quail. It is, however, a member of a different family, being one of the bustard quails, and has three toes only, with the hind toe missing. Its bill and wings are longer than the common quail's and in appearance more like those of a rail; the plumage is also darker with a good deal of black and ashy brown on the back. The underparts are ruddy brown on the breast shading to yellowish buff.

Nesting habits, etc.—Similar to those of the common quail. Eggs more greyish-white and thickly speckled with brown and pale purple.

Order ALECTORIDES

This is a special order covering the bustards, cranes and rails and forming a dividing line between the orders *Gallinæ* (game-birds) and *Limicolæ* (snipes, plovers, etc.). I shall here deal only with the rails.

Family—RALLIDÆ—

THE RAILS, COOTS, ETC.

Although one member of this family is known as the land-rail, we only have to deal with those which are water-birds, and it would seem that the long legs and toes are particularly suited for wading and swimming. They inhabit marshes and ponds where there is plenty of cover and only appear to fly when forced to do so, they are, however, capable of long flights for purposes of migration.

The neck is long, the head small, and the wings short and rounded. Some members of the family in other parts of the world are almost flightless.

ORDER : ALECTORIDES
FAMILY : *RALLIDÆ*
C. B. No. : 203A

INDIAN WATER-RAIL

Rallus aquaticus indicus.

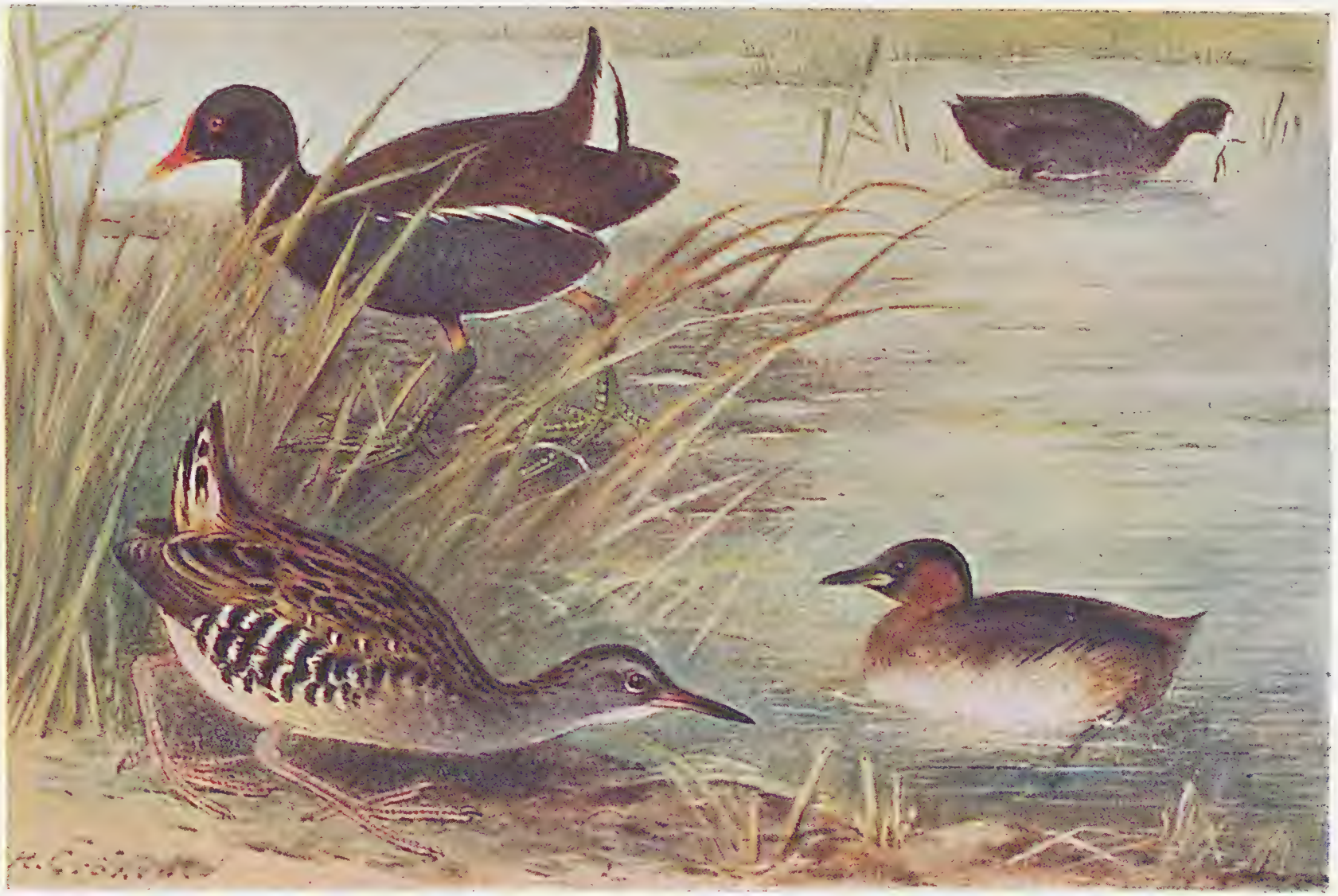
(See Plate No. XXI)

Field identification.—Blue-grey breast. Flanks barred brown and grey. Legs and feet dull pink.

Description.—Length about 10 inches (*female* about an inch less). The sharp beak is about $1\frac{1}{2}$ inches long. Upper parts olive-brown streaked with black, the crown being darkest. Throat pale grey to white, breast blue-grey and abdomen reddish-brown, the flanks streaked across with light grey.

This bird is very difficult to sight owing to its skulking habits, and when disturbed from among the reeds it will only rise a few feet, after a long run, before again diving into cover. The wings are short and weak, coloured like the upper parts, with some white splashes on the outer coverts. It is a typical water-bird with the legs of a wader.

Nesting habits, etc.—This rail is stated by Gee and Moffett to be a summer visitor (and therefore breeding here) but I think they have mistaken it for the blue-breasted banded rail which is a very similar bird with similar nesting habits. From all the records I have at my disposal I would say that these birds breed farther north but visit us in course of migration in the early summer and late autumn.



"Shanghai Birds"

Plate No. XXI

Moorhen
Indian Water-Rail

Common Coot
Little Grebe (Dabchick)

ORDER : ALECTORIDES
FAMILY : *RALLIDÆ*
C. B. No. : 204

BLUE-BREASTED BANDED RAIL

Rallus striatus

or

Hypotœnidia striata

Field identification.—Very much like the Indian water-rail but with upper parts barred with dim, wavy black bars. Legs and toes dark olive-brown.

Description.—Length about 9½ inches, and therefore slightly smaller than the Indian water-rail but very like it in general appearance. The olive-brown upper parts have black centres to the feathers and the whole upper plumage is dimly barred with wavy non-continuous bars of black. The wings are black and white and the tail brown to black with narrow white bars. Crown, head and neck, chestnut with a blackish centre on the crown. The breast, etc., is slate-grey and the flanks are black barred with white. Note carefully that the legs are dark olive-brown instead of dull pink (as in the Indian rail).

These birds are summer visitors and may be found breeding between May and August. They have the usual skulking habits of the water-rails and are not often seen.

Nesting habits, etc.—The nest of this bird, like its owner, is so well hidden that it is very rarely found. I once found some magpies quarreling over a rail's egg which they had just stolen, but I failed to find the nest after a most careful search. It is said to be a fairly solid structure of reed-leaves, etc., placed in deep cover a foot or so above the water line. The eggs have a pinkish white background with underlying lilac-grey spots, above which are reddish-brown spots and blotches, much thicker towards the large end of the egg. From five to seven, and sometimes more eggs are laid.

ORDER : ALECTORIDES
FAMILY : *RALLIDÆ*
C. B. No. : 215

COMMON COOT

Fulica atra

(See Plate No. XXI)

Field identification.—Black with a white frontal plate.

Description.—About 16 inches long. A very drab looking water-bird, dull black all over with a white frontal plate. It is easily distinguished from the moorhen, being slightly larger, having no white under the tail, and the frontal plate white instead of red. It is this white plate running from the base of the beak to the top of the head which has earned for this bird in England the name of "bald-headed coot."

Nesting habits, etc.—The nest is a mass of weeds, etc., generally afloat or at least surrounded by water. Seven to ten eggs are laid, grey or brownish-grey, finely speckled with purplish-black, and a few spots of the same colour.

ORDER : ALECTORIDES
FAMILY : *RALLIDÆ*
C. B. No. : 210

MOORHEN

Gallinula chloropus parvifrons

(See Plate No. XXI)

Field identification.—Red frontal plate and prominent white feathers showing beneath up-standing tail.

Description.—Length 13 to 14 inches. At a distance this bird appears to be black with a little white at the flanks and tail. The actual colour of the upper parts is a dark olive-brown, while the head, neck and underparts are a deep slate grey. The small frontal plate above the beak is red. There is a little white on the flanks, and the white feathers below the tail show prominently as the bird scurries away from you.

Moorhens are not at all common in our immediate neighbourhood, but they are spread all over China and are fairly common summer visitors in the Yangtze Valley.

Nesting habits, etc.—The nest is a large mass of reeds, rushes, weeds etc., built either in the water or just above it. There are from seven to nine eggs with a pale buff ground more or less speckled and spotted with reddish-brown and grey.

Order **LIMICOLAE**

This is a very large order covering all the "waders" such as sandpipers, snipes, oyster-catchers, curlews, etc. These are divided into at least three families of which we are here only concerned with one.

Family—**CHARADRIIDÆ**—

THE PLOVERS, SNIPES, ETC.

This is the main family of the order limicolæ and includes all the plovers, snipes, sandpipers and other wading birds. They usually inhabit swampy ground and have fairly long necks with a long bill suitable for feeding in mud and water. The plumage is usually dull coloured or streaked and apparently designed to make the bird almost invisible when feeding on the ground. I am only dealing here with the sandpipers, snipes and woodcock.

ORDER : LIMICOLÆ
FAMILY : *CHARADRIIDÆ*
C. B. No. : 260

COMMON SANDPIPER

Actitis hypoleucus aurita

(See Plate No. XXII)

Field identification.—A small wader, greenish-brown or grey above, and white below.

Description.—Length 8 inches. The plumage of the upper parts is greenish-grey, barred and striated with brown and black, or the general effect might be described as "greenish-brown." The upper tail feathers are the same as the rest of the upper parts, but with faint black bars. The underparts, including the under tail feathers, are white but there is a variable washing of grey-brown on the throat and upper breast.

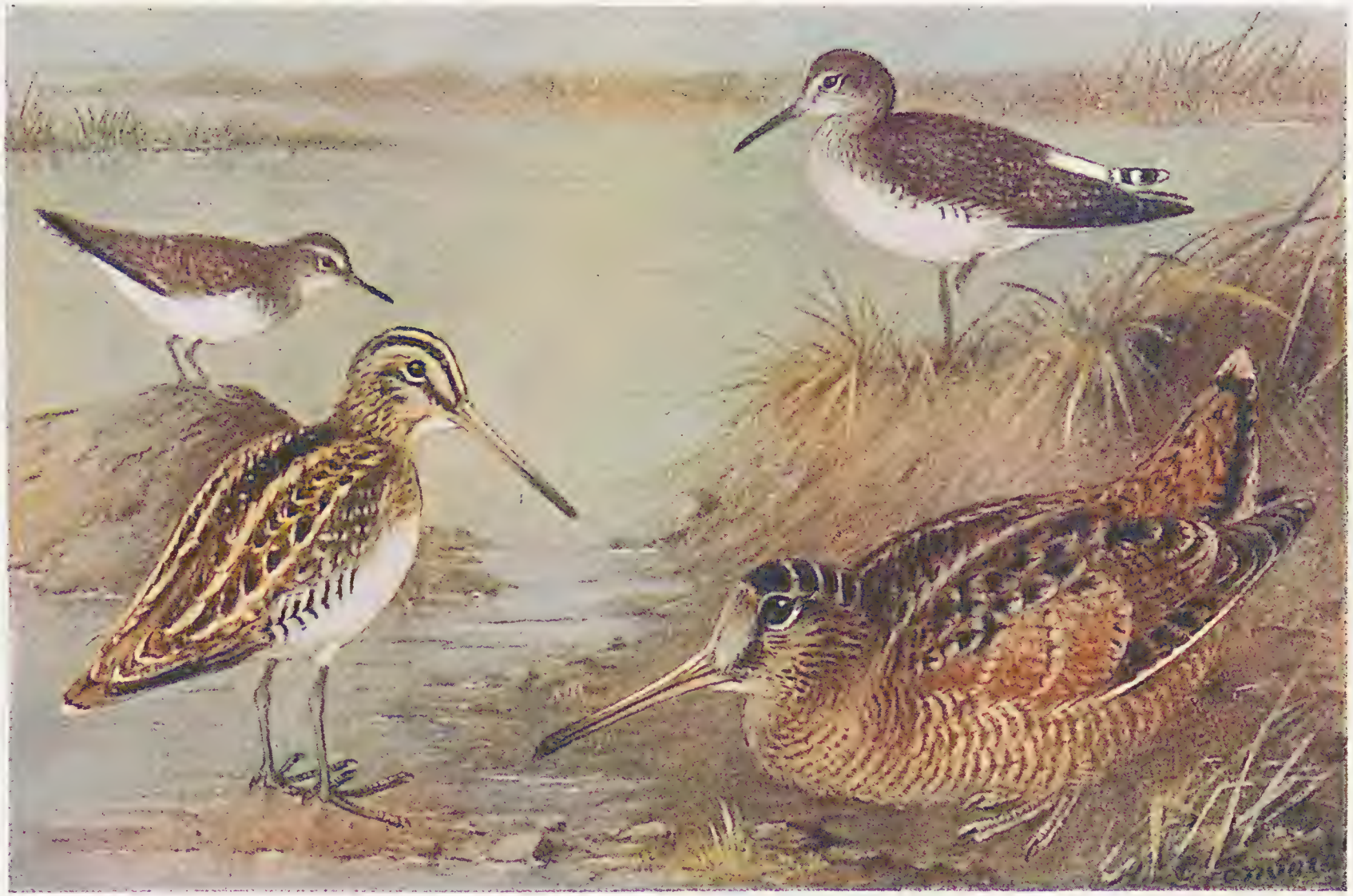
In flight the most prominent feature is the white of the underparts from breast to tail.

These sandpipers are said to be residents in the Yangtze Valley, but I only see them here in the Spring. You will usually find them on the banks of small creeks or ponds, wading in search of worms, larvæ, etc. When you see the bird wading beside a mud-bank you may note that it becomes almost invisible when standing still owing to its protective colouring, but as soon as it moves its form can be seen against the shadows of the background.

These little birds are often referred to by local sportsmen as "Snippet" and are sometimes called "Summer Snipe."

Nesting habits, etc.—There is hardly any nest to speak of, merely a few leaves or dead grasses placed in a hollow or any convenient hiding place on the ground. There are four eggs, creamy-buff spotted with brown and grey.

I can find no records of these birds breeding in our immediate neighbourhood.



"Shanghai Birds"

Plate No. XXII

Common Sandpiper
Snipe (Common or Fantail)

Green Sandpiper
Woodcock

ORDER : LIMICOLÆ
FAMILY : *CHARADRIIDÆ*
C. B. No. : 257

GREEN-SANDPIPER

Tringa ochropus ochropus

(See Plate No. XXII)

Field identification.—Slightly larger than common sandpiper. Tail white with black bars.

Description.—Length 9½ inches. The bronze-green and olive-brown upper parts are rather prominently streaked and spotted with white. The tail is white with four distinct black bars at the end. The under parts from throat to tail are white, with distinct streaks of brown on the throat, upper breast and flanks. The bill is black to dark green at the base, and the feet and legs olive-green. This bird may often be confused with the common sandpiper, but may be distinguished by the following :—

Larger size and longer legs.

Upper parts more greenish and not showing so much brown in plumage.

Black bars across end of upper white tail-feathers are easily visible.

Under wing feathers darker.

This is a winter visitor only and is often to be seen in the very early Spring on its way to the northern breeding grounds. The call-note is a shrill and somewhat long-drawn " c-h-e-e-e-t," and the alarm cry a short " tui-tui-tui." This is a lonely bird and very shy in its habits. It will, however, return to the same feeding ground day after day and only rise when approached very close, depending probably on its protective colouring. When flushed it rises with the sudden alarm cry " tui-tui-tui " and rising high flies clear away.

Nesting habits, etc.—Does not breed here, but is said to use the deserted nests of thrushes, etc. Eggs three to four pale green to buff in ground-colour with a few purple-brown and grey spots.

ORDER : LIMICOLÆ
FAMILY : *CHARADRIIDÆ*
C. B. No. : 273A

FANTAIL SNIPE

OR

COMMON SNIPE (LOCALLY CALLED WINTER SNIPE)

Capella gallinago

(See Plate No. XXII)

Field identification.—Underwings and flanks barred dark brown.

Description.—Length about 11 inches. The brown bill is $2\frac{1}{2}$ inches long, the legs greenish. The wings and upper parts are fawn to brown with grey and black patches. There are a series of buff or brown spots, giving the appearance of stripes right down the back. The neck and throat are pale fawn with black splashes, the rest of the underparts being white with the underwings and flanks barred and spotted brown.

This snipe may be identified by counting the tail quills (rectrices) which are 14 in number (*see* other snipes).

A winter visitor only, say from October to April, after which it leaves to breed in the north.

ORDER : LIMICOLÆ
FAMILY : *CHARADRIIDÆ*
C. B. No. : 275

GREATER SPRING SNIPE

OR

SWINHOE'S SNIPE

Capella megala

Field identification.—The largest of our snipes, though not as large as the solitary snipe occasionally to be seen in the Shanghai game market. Crown of head black with yellowish-brown line down the centre.

Description.—Length 11½ to 12 inches. The upper parts and wings are a mixture of brown, black and grey or white. Many feathers have a black centre, with a wide border of brown or white, giving a mottled effect. The crown of the head is usually black with a yellowish line running down the centre. The tail is slightly larger than that of the other snipes and has a distinct brown bar next to the tip. The underparts are pale grey to white with irregular brown spots, and there are black bars on the flanks.

This snipe may be identified by counting the tail quills which are 20 in number. It will be found passing in migration both in spring and autumn.

ORDER : LIMICOLÆ
FAMILY : *CHARADRIIDÆ*
C. B. No. : 274

PIN-TAIL SNIPE

OR

LESSER SPRING SNIPE

Capella stenura

Field identification.—Difficult to distinguish from other snipes by its general appearance, but has a curious habit of throwing the body back, until it is almost vertical, when alighting.

Description.—Length about 11 inches. Upper parts and wings a mixture of brown, black and grey, as in the greater Spring snipe, but there is more brown in the colouring and the black and grey spotting or mottling is not so distinct. Underparts grey to white at centre with brown spots and bars on the flanks. The under wing feathers are brown with arrow-head bars of white.

The tail is again the distinguishing feature. There are 26 quills of which the five central pairs are of normal width while the eight side pairs are very small and narrow, which accounts for this snipe being named " pin-tail."

It passes us in spring and autumn migration, but is more commonly found in large numbers in the spring.

ORDER : LIMICOLÆ
FAMILY : *CHARADRIIDÆ*
C. B. No. : 272

WOODCOCK

Scolopax rusticola rusticola

(See Plate No. XXII)

Field identification.—Very long bill. Plumage reddish brown above and yellowish-brown below, much barred. Note the curiously erratic flight when flushed.

Description.—About 14 inches long. The brown pointed beak is about 3 inches long and obviously intended for digging up worms, larvæ, etc.

The back, wings and upper parts are a handsome mixture of reddish-brown, with splashes of grey and prominent patches of dark brown and black. The top of the head is more greyish-brown, the chin white, the throat yellowish-fawn, the breast and lower parts yellowish-brown barred darker brown.

This bird comes to us as a winter visitor only, and is quite unmistakable when flushed, by the very long bill and the erratic flight on rising which makes him a difficult mark for the sportsman.

Order LARI

This order covers the gulls and terns, in fact all the sea-birds with graceful bodies, and long wings giving them strong and sustained flight. The feet are webbed and they are powerful swimmers.

Family—LARIDÆ—

THE GULLS AND TERNS

This family name is now generally accepted as embracing all the gulls and terns, though some authorities have divided them into two or more families. There are many kinds of gulls and terns represented on the coast of China but I shall deal here with only six of the best known.

ORDER : LARI
FAMILY : *LARIDÆ*
C. B. No. : 302

EASTERN HERRING GULL

Larus argentatus vegæ

Field identification.—Herring gull with pink legs and feet.

Description.—About 24 inches long. This gull will be found on our coast and tidal waters in winter. In adult birds the whole body from head to tail is white except for a grey back and grey wings with the long flight feathers, black, tipped with white. When at rest the tips of the black and white wing feathers will be noted to be crossed behind the bird.

The beak is yellow and the legs and feet pink.

Young birds for the first year or so are mottled grey and brown, and at each moult they throw off some of the darker feathers and gradually assume the full adult plumage. This habit among gulls is very confusing to observers who are not acquainted with the changing plumage.

ORDER : LARI
FAMILY : *LARIDÆ*
C. B. No. : 302A

ARCTIC HERRING GULL

Larus argentatus cachinnans

Field identification.—Herring gull with yellow legs and feet.

Description.—Length about 24 inches. This gull may also be seen on the coast in winter. It differs very little in appearance from the eastern herring gull except that the grey of the back is lighter and the white markings on the black wing feathers are more distinct. It is, however, easily distinguished by its *yellow feet and legs.*

Young birds have the usual mottled plumage (*See* eastern herring gull).

ORDER : LARI
FAMILY : *LARIDÆ*
C. B. No. : 305

COMMON GULL

Larus canus

Field identification.—Much smaller than the herring gull, but similar in general appearance.

Description.—Length about 18 inches. The plumage is white except for pale blue-grey back and wings, the long wing-quills black with white markings as in the herring gull. The bill is green at the base and yellow at the tip. The feet and legs greenish-yellow. This is another winter visitor on our coast and may easily be distinguished from the herring gull by its smaller size. *Young birds* show the usual changes from their original mottled appearance and will often be noted with brown markings on the head and tail, though otherwise arrayed in adult plumage.

ORDER : LARI
FAMILY : *LARIDÆ*
C. B. No. : 309A

LAUGHING GULL

Larus ridibundus sibiricus

Field identification.—Small gull with red bill. Generally seen with a certain amount of grey-brown on back of head and nape, otherwise like small herring gull.

Description.—Length about 16 inches. This is another winter visitor and the plumage may therefore be described as white except for the blue-grey mantle and grey and white wings with long black quills. In summer the whole of the head is grey-brown, and patches of this colouring are often left in the winter. *Young birds* are mottled brown, grey and buff, the underparts being white with splashes of yellow. The red bill is a good identification mark both in young and old birds.

The cry of this bird is peculiar, and the sharp " ki-ki-ki-*quar* " is probably the " laugh " which gives it its name.

ORDER : LARI
FAMILY : *LARIDÆ*
C. B. No. : 292

COMMON TERN

Sterna hirundo

or

Sterna fluviatilis

Field identification.—Swallow-like sea-bird with black crown, grey upper parts and white lower parts.

Description.—About 15 inches long. Legs red, bill red to black. The forehead is white and the crown black-brown, with the neck showing white beneath it, the rest of the upper parts are a pale blue-grey including grey wings with the outer feathers edged grey-black. The lower parts are white and the forked tail is grey and white edged with brown-black.

This bird passes us as a migrant and will most likely be seen in the spring. It has the swift fluttering flight peculiar to all terns (also known as sea-swallows) usually flying with the beak held downwards. Its alarm note, a long-drawn " pee-aah " will always attract your attention.

ORDER : LARI
FAMILY : *LARIDÆ*
C. B. No. : 297

LESSER TERN (CHINESE)

Sterna sinensis

Field identification.—A very small sea-swallow with black crown and nape.

Description.—From 8 to 9 inches long. The forehead is white, crown and nape black, back and wings light grey, with all other plumage including the tail white. There is a black eye streak running from the sides of the crown to the base of the bill, and black or dark grey edgings to the outer wing-quills.

These little terns pass our neighbourhood in migration, and breed in the north.

Order GRESSORES

This order consists of the storks, herons, etc., and is divided into three or four families of which we only have to deal with one. These are long-legged birds, with long strong wings giving them a peculiarly slow and laboured wing-beat.

Family—**ARDEIDÆ**—*THE HERONS*

This family are generally known as the herons though the smaller members go by the name of egret, while others are known as bitterns. They have long legs, necks and beaks, and small compressed bodies which look much larger owing to the loose plumage. The large wings are rounded and in no case pointed. A further peculiarity is the presence, on the breast and sides of the rump, of patches of "powder-down" which exude a greasy powder.

ORDER : GRESSORES
FAMILY : *ARDEIDÆ*
C. B. No. : 28

GREY HERON

Ardea cinerea cinerea

(See Plate No. XXIII)

Field identification.—A large grey bird with wide rounded wings and slow graceful flight.

Description.—Length up to 38 inches, but when seen in flight with the neck drawn in, the size of the bird can only be judged by the wide spread of the wings. Each wing is about 18 inches long, and these added to the width of the body give a measurement of nearly four feet from wing-tip to wing-tip. In spite of these large measurements the heron is a light bird and would easily fall a prey to his natural enemies such as the goshawk if he were not able to fly very high and thus elude them. For centuries the heron was protected in England from any form of killing except by hawking (or being shot by the long-bow) and was always considered as the big game of the falconer.

The general appearance of the bird, particularly in flight, is a dull slate-grey, but examined closely it will be found to have a blue-black crest, a dull-white neck streaked with grey and many other variations on the general grey colour-scheme which can better be understood from Plate No. XXIII. The heron here depicted with neck outstretched is on the alert and not in the contemplative position, with the neck indrawn, which it so often assumes when fishing. The call, when the bird is flying, is deep and trumpet-like.

The heron is a model fisherman with patience and skill rivalled by few. He takes his prey by lightning darts of the neck and beak (always when wading) and swallows it whole. The food is conveyed to the young by disgorging it undigested, and I have learnt (from

"Shanghai Birds"

Plate No. XXIII

(Little Egrets)
Cattle Egret
Pond Heron

Grey Heron

a film recently displayed by Captain Knight in England) that the bird will disgorge his food and drop it from the tree-tops, if suddenly disturbed at the nest.

Nesting habits, etc.—These birds are resident in Kiangsu but I know of no nests in or about Shanghai. The heron builds a large platform-like nest of sticks in the tree-tops and will return annually to a favoured spot. There is a lining of softer materials, such as grasses, and three or four large eggs of plain, dull and pale, greenish-blue. Herons usually build in colonies which are known as heronries.

ORDER : GRESSORES
FAMILY : *ARDEIDÆ*
C. B. No. : 38

NIGHT HERON

Nycticorax nycticorax

or

Ardea nycticorax

Field identification.—Small grey heron with broad wings. Feeds only between dusk and dawn and more likely to be identified by the harsh croak " quark," as it passes overhead.

Description.—About 22 inches long. Crown to upper back, black with dark green gloss. There are three very narrow white feathers on the nape forming a kind of crest. The sides of the throat, breast and underparts shade from pale grey to white, the rest of the plumage, back wings and tail, are a dull ash-grey and the general appearance of the bird when seen in flight (usually in a bad light) is a universal dull grey. The bill is strong and arched and almost black in colour. Young birds are more brown in colour and heavily streaked and spotted yellowish.

These birds are resident in Kiangsu but are seen here only in the summer. Their nocturnal feeding habits make them very rarely observed except perhaps in the very early morning. The croaking call " quark, quark " is peculiarly deep and harsh and easily recognized as the birds pass in the dark.

Nesting habits, etc.—The nests are made in colonies usually in high trees and consist of a small platform of sticks. They may however choose other and lower nesting sites using rushes, reeds, etc., as material. There are four or five pale blue eggs.

ORDER : GRESSORES
FAMILY : *AEDEIDÆ*
C. B. No. : 36

POND HERON

Ardeola bacchus

(See Plate No. XXIII)

Field identification.—A small heron, with head and neck deep chestnut brown, and back amost black, plumage otherwise white.

Description.—Length from 18 to 20 inches. These birds stay with us from May to October and are therefore seen in breeding plumage. I find them very difficult to describe accurately and even the illustration on Plate No. XXIII is not altogether convincing since it cannot convey the purplish-bronze back-plumes of the adult in his finest array. The head and neck are chestnut-brown, shading to slate colour over the breast, and the rest of the plumage is white. I must add that at close quarters the general effect is white and brown, but when the bird passes overhead in flight, with the neck drawn in, it appears to be all white.

This is one of our most familiar summer visitors and may be seen wading at the edge of any pond or creek in search of food.

They are commonly known as "Paddy-birds."

Nesting habits, etc.—Build the usual platform of sticks, etc., in the tree-tops, generally in colonies, and lay three or four pale greenish eggs.

ORDER : GRESSORES
FAMILY : *ARDEIDÆ*
C. B. No. : 32

LITTLE EGRET

Ardea garzetta

Field identification.—A pure-white heron. Bill black (compare cattle egret, with yellow bill.)

Description.—Length 22 to 24 inches or a few inches longer than the cattle egret. This is a pure white heron. In the breeding season the dorsal plumes run right down the back and extend slightly beyond the tail. Two elongated feathers make a small though hardly noticeable crest. This is one of our familiar white herons and is known to breed in our neighbourhood.

The bill of this bird is black, (though the lower mandible is slightly yellowish.)

Nesting habits, etc.—These birds build in colonies, sometimes in company with other herons. The nest is the usual platform of sticks placed high in the trees : there are five or six pale blue eggs about $1\frac{3}{4}$ inches long.

ORDER : GRESSORES
FAMILY : *ARDEIDÆ*
C. B. No. : 35

CATTLE EGRET

Bubulcus coromandus

(See Plate No. XXIII)

Field identification.—Pure white with head, back of neck and dorsal plumes orange-buff. Bill, yellow.

Description.—Length 19 to 20 inches. This is one of our more common herons and when seen at a distance, particularly in flight, it appears to be pure white. Like all other herons it flies with the neck tucked in to the shoulders and the legs straight out behind (see small figures on Plate No. XXIII). These are summer visitors to Shanghai and hence may be seen in their breeding plumage. They then have the head, back and sides of the neck and long dorsal plumes, all of orange buff. The chin, front part of neck and all other plumage pure white. The dorsal plumes do not extend beyond the tail and are not therefore very noticeable. The bill is yellow. It should be noted that in flight the bird appears to be all white, and only the glasses will reveal the orange-buff plumage. When the breeding plumage is moulted the birds are pure white.

These birds keep to well-watered districts but do not of necessity frequent the water. They feed in long grass, etc., on grasshoppers and insects and are constantly in attendance on cattle for the sake of the insects they harbour.

Nesting habits, etc.—They follow the usual habits of herons, building large nests of sticks in the high trees, often in company with pond herons. There are three to five pale green eggs a little less than $1\frac{3}{4}$ inches long.

Order **STEGANOPODES**

This order embraces the pelicans, cormorants, etc., and is sometimes considered as a sub-order of the stork-like birds. I shall only refer to the one family of pelicans.

Family—**PELECANIDÆ**—*THE PELICANS*

Pelicans are migratory birds breeding in large colonies. They have a very long bill with a hooked tip below which is a large pouch in which fish are scooped from the water. The feet are webbed and the birds swim more than they walk. There are three kinds of pelicans known in China of which the one described below is seen here occasionally in winter.

ORDER : STEGANOPODES
FAMILY : *PELECANIDÆ*
C. B. No. : 21

SPOTTED-BILLED PELICAN

Pelecanus philippensis

Field identification.—An immense bird, almost entirely white, flying with slow graceful wing-beats, head tucked in like a heron's.

Description.—Total length nearly five feet. When seen in winter the white plumage lacks the rosy-pink on the lower back and flanks but is much streaked and washed with brown or brown-grey. The wings are tipped black, the long bill is yellow with large blue-black spots on the upper mandible. There is a large purplish pouch below the bill, much spotted with black. These birds may sometimes be seen passing overhead in small flocks in the winter months but are seldom seen resting or feeding : they feed on fish which they scoop out of the water with their bills and hold in the pouch, usually first driving the fish into shallow water by beating the surface with their wings.

The only specimen which I remember being shot in or near Shanghai was unfortunately mistaken for "some kind of a wild turkey" and plucked by the cook ready for roasting before its identity could be established, being thus lost to the local museum.

Nesting habits, etc.—These same birds breed in Ceylon and Burma, in large colonies of hundreds of thousands. There they build an immense nest of sticks high up in the trees and lay three chalky-white eggs, about three inches long, narrow and pointed. The pelican of the Philippines merely makes a hollow on the sand, while others make a small nest of sticks on the ground.

Order **PYGOPODES**

A small order containing only the two families of the grebes and the divers. They have lobed toes or entirely webbed feet and very short tails, and are therefore very suitably equipped for swimming under water. We are not concerned here with the family of divers and will only deal with the grebes.

Family—**PODICIPIDÆ**—*THE GREBES*

The toes of the grebes are not webbed but are lobed, that is to say they have a kind of web on each side of the toe but this is not joined across like a complete web. The plumage is more like fur than feathers and the tail is almost negligible. They live on fish and dive and swim under water more like a fish than a bird. Only one of these grebes is a resident in this neighbourhood and I am therefore omitting the other two which are rare winter visitors only, (the great crested grebe and the black-necked grebe.)

ORDER: PYGOPODES
FAMILY: *PODICIPIDÆ*
C. B. No.: 8

LITTLE GREBE (EASTERN)

OR

DABCHICK (EASTERN)

Podiceps ruficollis poggei

or

Podiceps minor.

(See Plate No. XXI)

Field identification.—Dull grey-brown bird, darker on crown and back, and like a floating ball of fluff, always seen on fresh water.

Description.—About 9½ inches long. This little water-bird has the general appearance of a sooty brown ball with no visible tail. He will disappear beneath the water like a flash and you will probably not see him rise again if there is any suitable cover for him. This general appearance and habit has earned for him among the Chinese the name of the ghost bird. The upper parts are a dull grey-brown, the lower parts grey with splashes of grey brown, the crown, nape and back are dark brown and there is a patch washed rufous on the sides of the neck (very difficult to observe when the bird is swimming). The wings are darker, almost black, and from certain angles the bird has an almost black appearance. The bill is black tipped with white.

This bird is a resident but is not very common in our neighbourhood. You will only find it in secluded spots where there is water with plenty of cover.

Nesting habits, etc.—The nest is a floating mass of reeds, weeds, etc., tethered to growing vegetation. The eggs are carefully covered when left, and you would generally pass the nest mistaking it for a tangle of floating weed. There are four to eight eggs which begin by being white, but which are usually much stained by the wet material on which they are laid.

Order ANSERES

The swans, geese and ducks all belong to this order and all take their name from the goose which must therefore be considered as the first of his kind. The bill is covered with a thin skin and has a peculiar formation like a finger-nail at the tip ; by this peculiarity alone you may recognize any of the order. All of them have webbed feet.

Family—**ANATIDÆ**—*THE GEESE, ETC.*

This family is an example of how our scientists seem to have confused rather than helped us. It would have seemed so much easier to have had separate families for the ducks, geese and swans (familiar names known to everybody), but ornithologists have decided this division cannot be maintained and they must all be considered as of one family. This same family will therefore include the merganser and the teal and I will here deal only with a few of the most common of this large group.

ORDER : ANSERES
FAMILY : *ANATIDÆ*
C. B. No. : 95

RED-BREASTED MERGANSER

(ALSO KNOWN AS "FISH DUCK")

Mergus serrator.

Field identification.—A large diving bird with black head (greenish), white neck and reddish breast heavily spotted black; beak red.

Description.—About 22 inches long, though the bird looks a good deal smaller in the water. This is a "diving goose" often referred to locally as the "Fish-duck." The black head, greenish when seen at close quarters, carries a shabby looking crest which is hardly perceptible. The neck is like a long white collar which finishes abruptly at the black back and reddish breast streaked with black. The wings are chiefly white with some black and brown barring, and the underparts white with ashy lines and patches on the flanks. The beak and feet are red.

The *female* is much smaller than the male and plainer in her appearance, the head being brownish and much of the upper plumage ash-brown to dark brown.

These birds may be seen swimming with head erect, or diving for fish which they hold easily in their strong beaks, notched like a saw. In flight the neck is not outstretched but slightly folded back. They are winter visitors only.

ORDER: ANSERES
FAMILY: *ANATIDÆ*
C. B. No.: 75

COMMON TEAL

Nettion crecca

or

Anas crecca.

Field identification.—Male, a very small duck with red head traversed by a deep green stripe. *Female,* mottled brown.

Description.—About 14½ inches long, and hence the smallest of our ducks. The bright chestnut head and neck crossed with a deep green stripe from eye to nape are the outstanding features of the male, apart from the prominent green patch on the ashy wings. The breast is buffish with heavy dark spots. The whole of this bird's plumage is variegated with dark and light grey, but the outstanding features for identification are those given above.

The *female* is a comparatively dull little bird, mostly dark brown mottled with reddish-grey, but she has the green speculum on the wing like the male.

These are winter visitors and may be found on any patch of water. The females "quack" sharply, but the males produce a sound which may be likened to the word "grit."

ORDER : ANSERES
FAMILY : *ANATIDÆ*
C. B. No. : 77

GARGANEY

OR

SUMMER TEAL

Anas querquedula

Field identification.—A chestnut-brown neck and dusky crown, divided by a white stripe through the eye and down the nape.

Description.—About 16 inches long or slightly larger than the common teal. This bird visits us in the early spring and late summer or autumn. The ruddy-brown neck and head, dusky on the crown, with a prominent white stripe running from the eye round the crown and down the nape are the most distinctive marks. The breast is a pale buff with crescent-shaped black bars, the rest of the underparts whitish, but noticeably streaked dark grey to black on the flanks. The back is brown mottled grey, and the wings grey to brown with a not very prominent patch of green.

The plumage of the *female* is, as usual, duller than that of the male. The face and neck are whitish but show the white mark over the eye. The upper parts are mostly brown, and the green speculum on the wing is hardly perceptible.

The male garganey has a peculiar rattling chirp, something like a cricket's. He may be distinguished from the common teal by his general lighter colour and greater length.

ORDER : ANSERES
FAMILY : *ANATIDÆ*
C. B. No. : 73

COMMON WILD DUCK

OR

MALLARD

Anas boschas (or boscas)

Field identification.—A large duck with metallic-green head and narrow white neck-ring. Purple wing speculum.

Description.—About 24 inches long. The *male* has a greenish bill with a black tip, and orange legs. The head and neck are a dark metallic-green with a distinct though narrow white collar. The breast chestnut-brown, the lower parts greyish-white showing grey on the flanks. The back is black-brown to deep black (at the tail) glossed with green, and the wings brown to grey with a fine purple patch or speculum bordered with black.

The *female* is smaller by at least two inches and differs considerably in her appearance. The whole plumage is buff to brown heavily streaked and splashed with dark brown to black. The bill is yellowish with a black tip. The wings have the same speculum as the male's but it is often narrower and not such a prominent purple.

The mallard is a winter visitor in these parts and is the wild duck sought by sportsmen. It is also said to be the progenitor of our domestic ducks.

The call of the mallard is " quork " or quark."

ORDER : ANSERES
FAMILY : *ANATIDÆ*
C. B. No. : 74

YELLOW NIB

OR

SWINHOE'S DUCK

Polionetta zonorhyncha

or

Anas zonorhyncha

Field identification.—A large brown duck, with black bill tipped yellow.

Description.—About 25 inches long. This duck is said to be a resident in Kiangsu, but we generally only see it in these parts in the winter when it may be found in company with the mallard. The sexes are alike and may best be described as like the *female* mallard (*q.v.*) but easily distinguished by the black bill with a yellow tip : there is also a fairly prominent eye-streak.

Again like the mallard, this duck forms a part of the general stock of domestic ducks.

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Seen in key Garden 1752 Avenue Toffee.

1 Bulbul.
2 Magpie.
3 Azure do.
4 Sparrow.
5 Grey Tit.
6 Blackbird.
7 Pale Crested
8 Spotted necked Dove
9 Crested Myzah.
10 Red backed shrike
11 Golden Oriole
12 Indian Cuckoo

1936 List of birds seen while in China.

1 Blakiston's Water Pipit.
2 Black-eared Kite.
~~Collared Grosbeak~~
3 Red-backed shrike
4 Dauurian Redstart
5 Pied Wagtail. Minghong.
6 Quail
7 Woodcock.
8 Skylark
9. Tree-sparrow.
10. Bonbul
11 Magpie
12 Azure Magpie
13 Blackbird
14 Crested Mynah
15 Rook
16 Spotted-necked Dove
17. Lesser Grey tit.
18 Webbs Crow-tit
19. long tailed tit
20. Ringfisher
21 Sparrow-hawk
22 Meadow bunting?
23 Oriental Turtle Dove.
24 Pale Ousel
25 Grey headed bunting?
26 Lapwing
27 Sandpiper.
28. Snipe
29. Collared Crow.
30 Rustic Bunting?
31 Silver throated tit
32 Hawfinch
33 Bush warbler
34 Pied kingfisher
35 White faced wagtail
36 Pied Harrier
37 Philippine shrike.
38 Stint. (?)
39 Cattle-Egret.
40 Hoopoe.
41 Peregrine Falcon (?)
42 Mandarin Duck.
43 Mallard.
44 Common Teal
45 Pheasant.
46 Black-winged Minivet (heard only)
47 Pied Woodpecker.
48 Dunlin (?)
49 Night Heron
50 Fan-Tail Warbler.

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